



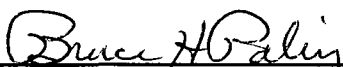
Five-Year Review Report
Second Five-Year Review Report
for
Southside Sanitary Landfill
Indianapolis, Indiana

September 2005

Prepared by:
Indiana Department of Environmental Management

for
U. S. EPA, Region V, Chicago, IL

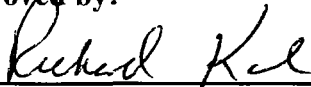
Approved by:


Bruce H. Palin
Assistant Commissioner
Office of Land Quality
Indiana Department of Environmental Management

Date:

9/16/05

Approved by:


Richard C. Karl
Director, Superfund Division
U.S. Environmental Protection Agency

Date:

9-20-05

Table of Contents

List of Acronyms.....	i
Executive Summary.....	ii
Five-Year Review Summary Form.....	iii
I. Introduction.....	1
II. Site Chronology.....	2
III. Background.....	2
Physical Characteristics.....	2
Land and Resource Use.....	3
Crossroads Greenhouse.....	3
History of Contamination.....	3
Initial Response.....	4
Basis for Taking Action.....	4
IV. Remedial Actions.....	4
Remedy Selection.....	4
Remedy Implementation.....	5
System Operations/Operation and Maintenance (O&M).....	5
V. Progress Since Last Five-Year Review.....	5
Permit Modifications.....	6
VI. Five-Year Review Process.....	6
Administrative Components.....	6
Community Involvement.....	6
Document Review.....	6
Data Review.....	6
Site Inspection.....	7
Interviews.....	7
VII. Technical Assessment.....	7
Question A:	
Is the remedy functioning as intended by the decision document?.....	7
Question B:	
Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the at the time of the remedy selection still valid?.....	7
Changes in Standards and to be Considered.....	8

Changes in Exposure Pathways, Toxicity, and Other Contaminant Characteristics.....	8
Question C:	
Has any other information come to light that could call into question the protectiveness of the remedy?.....	8
Technical Assessment Summary	8
VIII. Issues	8
IX. Recommendations and Follow-up Actions	8
X. Protectiveness Statement(s).....	8
XI. Next Review	8

Tables

Table 1 – Chronology of Site Events

Attachments

Appendix A - Site Maps
Appendix B - Groundwater Analytical Results
Appendix C - Site Photographs

List of Acronyms

AO	Agreed Order
ARAR	Applicable or Relevant and Appropriate Requirements
COC	Contaminant of Concern
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
FEMA	Federal Emergency Management Agency
FIT	Field Investigation Team
EPA	Environmental Protection Agency
FS	Feasibility Study
FYRR	Five-Year Review Report
IDEM	Indiana Department of Environmental Management
ISBH	Indiana State Board of Health
IAC	Indiana Administrative Code
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MW	Monitoring Well
NCP	National Contingency Plan
NFA	No Further Action
NPL	National Priorities List
ppb	parts per billion
ppm	parts per million
PRPs	Potentially Responsible Parties
RA	Remedial Action
RAOs	Remedial Action Objectives
RI	Remedial Investigation
ROD	Record of Decision
RPM	Remedial Project Manager
SARA	Superfund Amendments and Reauthorization Act
SMCL	Secondary Maximum Contaminant Level
SPM	State Project Manager
SVOC	Semi-Volatile Organic Compound
U.S. EPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

Executive Summary

The remedy for the Southside Sanitary Landfill (SSL) site in Indianapolis, Marion County, Indiana, is no further action. However, the Record of Decision (ROD), dated September 1995, for the SSL site recommended continuation of remedial measures stated in the November 1986 Agreed Order (AO), signed between the State and the landfill operators. The 1986 AO-specified remedial measures include: a hydraulic cut-off barrier (slurry wall), a leachate collection system, performance monitoring system, cover and grading requirements, operating procedures, closure and post-closure procedures and requirements, and the establishment of both closure and post-closure funds. Since 1986 the AO has served as the landfill operating permit, designated No. OPP 49-1. The current modified permit number is No. FP 49-01, dated March 2003. The trigger for this review is the last Five-Year Review Report, dated September 2000.

The U.S. EPA initiated the National Priorities List (NPL) delisting process for the SSL site in February 1997, and completed the process after a 30-day comment period. With the State's concurrence, the site was delisted effective July 3, 1997, and a notice was published in the Federal Register.

The assessment of this Five-Year Review found that the selected remedial measures currently in place, including the slurry wall, leachate collection system, and performance monitoring system, are functioning as anticipated. The remedy is protective of human health and the environment in the short term due to effective implementation of permit requirements at the site. Implementation and compliance with SSL permit No. FP 49-01 requirements provides an effective monitoring tool to mitigate any unforeseen actions at the site during the life of the permit. A review of the permit requirements indicated that the SSL operators are in compliance with federal and state landfill regulations. In the long term the landfill will be subject to closure and post-closure procedures and requirements. To ensure the long-term protectiveness of the remedial measures currently in place and the closure and post-closure requirements, the SSL owners will be required to implement an environmental easement/restrictive covenant on the site property.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name (from <i>WasteLAN</i>):		Southside Sanitary Landfill
EPA ID (from <i>WasteLAN</i>):		IND1980607360
Region: 5	State: IN	City/County: Indianapolis/Marion
SITE STATUS		
NPL status: <input type="checkbox"/> Final <input checked="" type="checkbox"/> Deleted <input type="checkbox"/> Other (specify)		
Remediation Status (choose all that apply): <input type="checkbox"/> Under construction <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Complete		
Multiple Ous?* <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Construction completion date: 9/30/1988
Has site been put into reuse? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
REVIEW STATUS		
Lead Agency: <input type="checkbox"/> EPA <input checked="" type="checkbox"/> State <input type="checkbox"/> Tribe <input type="checkbox"/> Other Federal Agency		
Author name: Prabhakar Kasarabada		
Author title: State Project Manager		Author affiliation: IDEM
Review period: September 2000 to September 2005		
Date(s) of site inspection: 5/12/2005		
Type of review: <input checked="" type="checkbox"/> Post-SARA <input type="checkbox"/> Pre-SARA		
<input type="checkbox"/> Non-NPL remedial action site <input type="checkbox"/> NPL State/Tribe-lead		
<input type="checkbox"/> Regional discretion <input type="checkbox"/> NPL-removal only		
Review number: <input type="checkbox"/> 1 (first) <input checked="" type="checkbox"/> 2 (second) <input type="checkbox"/> 3 (third) <input type="checkbox"/> Other (specify)		
Triggering action: <input type="checkbox"/> Actual RA on-site construction <input type="checkbox"/> Actual RA start		
<input type="checkbox"/> Construction completion <input checked="" type="checkbox"/> Previous five-year review report		
<input type="checkbox"/> Other (specify)		
Triggering action date (from <i>WasteLAN</i>): 9/20/2000		Due date: 9/20/2005

* - Operable unit

Issues:

There are no significant issues of concern that affect the short-term protectiveness of the remedial measures in place at the site. However, the long-term protectiveness of the entire remedy will require placement of an environmental easement/restrictive covenant on the site property.

Recommendations and Follow-up Actions:

Continue the Southside Sanitary Landfill (SSL) activities per the State operating permit No. FP 49-01 and develop and implement an Institutional Control (IC) Plan, and conduct the next five-year review.

Protectiveness Statement(s):

The remedial measures currently in place are protective of human health and the environment in the short term. The implementation of remedial measures currently in place include: a slurry wall, collection and disposal of leachate, and periodic groundwater monitoring per the requirements of the SSL permit No. FP 49-01. SSL activities are currently regulated and monitored by the State permit.

Long-Term Protectiveness:

Long-term protectiveness of the entire remedy will require the continued implementation of permit No.FP 49-01, the SSL owners' compliance with the closure and post-closure requirements and the placement of an environmental easement/restrictive covenant on the site property.

Other Comments: This FYRR is prepared per the requirements of CERCLA. However, the site is currently managed and regulated under a State issued solid waste permit.

**Southside Sanitary Landfill (SSL)
Marion County, Indianapolis, Indiana
Second Five-Year Review Report**

I. Introduction

The purpose of the five-year review is to determine whether the remedy at the site is protective of human health and the environment. The methods, findings, and conclusions are documented in the Five-Year Review Report. In addition, the Five-Year Review Report documents any issues found during the review and identifies appropriate recommendations to address them.

Indiana Department of Environmental Management (IDEM) staff prepared this report pursuant to the National Contingency Plan (NCP) and §121 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLA §121 states:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any action taken as a result of such reviews.

The U.S. EPA interpreted this requirement further in the NCP; 40 CFR §300.430(f)(4) (ii) states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

IDEM conducted the second five-year review of the remedy implemented at the Southside Sanitary Landfill (SSL) site in Indianapolis, Indiana. The State Project Manager (SPM) conducted the review for the entire site through the review period September 2000-September 2005. This report documents the results of the review. The triggering action for this statutory review is the last Five-Year Review Report, dated September 29, 2000. IDEM is conducting this review due to the fact that hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure.

II. Site Chronology

Table 1- Chronology of Site Events

Event	Date
Site Discovery	4/01/1979
Site Proposed for the EPA National Priorities List (NPL)	6/10/1986
First Administrative Order (AO)/Operating Permit signed between the State and SSL Owners	11/25/1986
Construction Work Completed (per AO signed in 1986)	9/30/1988
Placed as Final on the NPL	3/31/1989
Remedial Investigation/Feasibility Study (RI/FS) begun	9/29/1989
Second AO signed by SSL Owners for Conducting RI/FS	2/12/1990
RI/FS Completed	11/15/1993
Proposed Plan Released to Public	6/19/1995
Public Meeting for Proposed Plan	6/29/1995
ROD signed/No Further Action (NFA) Determination	9/14/1995
First 1986 AO/Operating Permit Modified as SSL Permit	1/15/1996
Site Deletion from NPL	7/03/1997
Termination of 1990 Second AO per Court Order	3/01/1999
First Five-Year Review	9/29/2000
IDEM Permit No. FP 49-01 (Operating Permit Renewal Issuance)	3/24/2003

III. Background

Physical Characteristics

The Southside Sanitary Landfill (SSL) occupies 312 acres in Decatur Township, Marion County, Indianapolis (Figure 1, See Appendix A). The SSL facility is located on the west bank

of the White River, one-half mile south of the intersection of Kentucky and Warman Road. The site location is approximately 4.5 miles southwest of downtown Indianapolis. The boundaries of the site include Eagle Creek and White River to the east and south respectively, and portions of Strakis Lake, and a Martin Marietta limestone mine to the west. The topography of the area is characterized by outwash alluvial deposits.

Land and Resource Use

The SSL is an active solid waste disposal facility that began landfill activities in 1971. In 1974, the local government licensed the northern side of the site for disposal of solid waste. The first excavated area was filled by dumping refuse, and covering with a layer of soil. A second disposal area was excavated 150 feet to the south. Approximately seven to eight thousand people live within a 3-mile radius of the site and use the groundwater as a drinking water supply. Nearby Eagle Creek, White River, and Fall Creek are used for recreational activities.

Crossroads Greenhouse

In the early 1980s, landfill gas recovery wells were installed at the SSL site and tests were conducted to determine if the landfill gas could be collected safely and in sufficient, reliable quantities to be used as an energy source. After considerable research and investment, more than 100 landfill gas recovery wells were installed. An intricate pipeline system was constructed at the landfill site to collect and transport the landfill gas. Some of the landfill gas collected is used to heat the vehicle maintenance shop and power the landfill's liquid pumping system. The Crossroads Greenhouse, a 6.5 acre glass greenhouse which opened in April 1989 is the major consumer of landfill gas from the site. Annually, more than 400,000 poinsettias, bedding plants, and hanging baskets are grown and supplied from the Crossroads Greenhouse. (See Appendix C).

History of Contamination

The SSL is an active sanitary disposal site that began landfill operations in 1971. The initial operation used a cut and fill procedure. In 1981, operations switched to the area method of filling, which consists of dumping, spreading, and covering. An estimated 4 million cubic yards of waste, including coal tar, asbestos, iron oxide, clarifier sludge, and paint waste, have been disposed at the landfill. In 1981, as part of a national survey for industrial waste disposal practices, four firms listed SSL as a disposal site for their wastes. Municipal solid waste is considered to be the site's primary waste. However, over the years, industrial and agricultural wastes have also been dumped at the site. In 1984, U.S. EPA contractors conducted a site inspection to acquire data for Hazard Ranking System (HRS) scoring. Groundwater samples from on-site wells indicated the presence of heavy metals. The site was scored and proposed for the National Priorities List (NPL) in June 1986 and finalized in March 1989.

Initial Response

In 1985, the SSL operators signed an agreement with the Indiana State Board of Health (ISBH) to correct drainage problems that were identified at the landfill. In 1986, the SSL owners signed an Agreed Order (AO) with the Indiana Department of Environmental Management (IDEM) to construct both a hydraulic cut-off barrier (known as a slurry wall) and a leachate collection system, in order to isolate the groundwater beneath the landfill from the surrounding groundwater. Thus contaminated groundwater is prevented from leaving the site, and the potential threat to the surrounding media has been eliminated. Additionally, the AO included a performance monitoring network; cover and grading requirements; operating procedures; closure and post-closure procedures and requirements; and the establishment of both closure and post-closure funds. The established well network monitors groundwater levels and quality both inside and outside the slurry wall. Since 1986, this AO served as the operating permit for the landfill.

Basis for Taking Action

In response to the U.S. EPA's listing of the SSL on the NPL in March 1989, the State and the SSL operators signed a second AO in February 1990. Per the 1990 AO, SSL operators agreed to conduct a Remedial Investigation/Feasibility Study (RI/FS). The RI/FS mainly focused on the performance of remedial measures, including the slurry wall, leachate collection system, the monitoring network, and other requirements of the 1986 AO.

The Remedial Investigation (RI) was conducted between January 1992 and November 1993. The RI analytical results and risk assessment evaluation established that the chemical contamination discovered at the site, with existing remedial measures in place, does not pose unacceptable risk to human health and the environment. The RI concluded that the remedial measures implemented per the 1986 AO were adequately protecting the surrounding media from the landfill contamination. The SSL ROD signed in September 1995 documented that the 1986 AO would serve as an effective monitoring tool to mitigate any unforeseen actions at the site. Since 1986 the first AO has served as the operating permit for the site, and the 1990 second AO was terminated in 1999.

IV. Remedial Action

Remedy Selection

The Record of Decision (ROD) was signed on September 14, 1995. The ROD documented that the existing remedial measures, which included a slurry wall; a leachate collection system; a monitoring network; cover and grading requirements; operating procedures, closure and post-closure procedures and requirements; and the establishment of both closure and post-closure funds, are protective of human health and the environment. Based on the RI conclusions, a "No Further Action" remedy was selected under CERCLA.

Remedy Implementation

Because of the implemented 1986 AO remedial measures, the State and the U.S. EPA decided in 1995 that no further action was necessary under CERCLA. The ROD relied upon effective implementation of the 1986 AO remedial measures and compliance with the State-issued SSL permit No. FP 49-01. An evaluation of the permit's requirements indicated that the SSL operators are in compliance with the groundwater requirements of 329 IAC 2-16 and that the site is subject to periodic inspections and monitoring schedules for a minimum period of 30 years after the closure of the landfill. The SSL permit requirements provide an effective monitoring tool to mitigate any unforeseen actions at the site during the life of the permit. The long-term requirements of closure and post-closure must be implemented at the end of the landfill's operating life. An environmental easement/restrictive covenant on the site property will be required to ensure long-term protectiveness of the measures currently in place, such as the slurry wall, and of the closure and post-closure measures, such as the final cover.

System Operation/Operation and Maintenance

The September 1995 ROD described the remedy selected for the site. Because landfill waste is contained at the site, the ROD recommended both a five-year review and the continuation of the 1986 AO remedial measures. The five-year review included a physical inspection of the site and a review of the monitoring data. The current State-issued landfill permit ensures the operation and maintenance of the SSL site.

V. Progress Since the Last Five-Year Review

This is SSL's second five-year review. Since the last five-year review, site operators have been implementing the requirements of the State issued operational permit No. FP 49-01. A review of the SSL permit requirements indicates that the landfill operators remain in compliance with State landfill regulation 329 IAC 10 and other permit requirements. SSL activities continued since the completion of the last Five-Year Review Report, dated September 29, 2000, include:

- Restoration of groundwater across the slurry wall to within a 12-inch inward gradient performance standard by a combination of increased pumping (inside) and artificial recharge (outside).
- Semi-annual groundwater monitoring through December 2004.

A review of the water level data indicated that the slurry wall performance is within acceptable limits. The analytical results from eleven monitoring wells located outside of the slurry wall showed that chemical concentrations are also within acceptable limits, except in MW-15R. Since May 2001, the semi-annual monitoring results have indicated elevated levels of ammonia, sulphates, and sodium in MW-15R. It has been determined that elevated ammonia concentrations are due to an off-site source. The groundwater analytical results from May 2000 through December 2004 are appended to this report. (See Appendix B)

Permit Modifications

There have been the following modifications to the permit issued to SSL.

- **March 24, 2003, Operating Permit Renewal Issuance:** This permit is valid until February 15, 2008. This permit has construction, operational, gas emission control, groundwater, and slurry wall monitoring requirements.
- **November 21, 2004, Permit Application, Major Modification:** Because of the Federal Emergency Management Agency's (FEMA) decision to change the base flood area near the site, an additional 10 acres will be added to SSL.

VI. Five-Year Review Process

Administrative Components

The State Project Manager (SPM) for the site conducted the SSL Five-Year Review. The support agency coordinator (the U.S. EPA Remedial Project Manager [RPM]) and IDEM's Permit Section staff assisted in the review. The review consisted of past site-related documents, the previous Five-Year Review Report, and analytical results dating from the completion of the last Five-Year Review Report, dated September 29, 2000.

Community Involvement

Members of the community were notified of the initiation of the five-year review by a public notice published in the local newspaper, the Indianapolis Star, dated February 10, 2004. The public notice included major components of the selected site remedy. The SSL site has generated little public interest or media attention since it was identified as a Superfund site.

Document Review

In conjunction with the U.S. EPA's RPM, the lead agency coordinator, the SPM, has reviewed the previous Five-Year Review Report, groundwater monitoring data, and site inspection report.

Data Review

The purpose of the site inspection and the review of groundwater monitoring data are to assess the physical condition and performance of the slurry wall, as well as ensure the site remedy remains protective of human health and the environment. Groundwater samples are collected semi-annually from eleven monitoring wells (See Appendix A) located outside of the slurry wall. The SSL permit requires the comparison of groundwater monitoring data to maximum contaminant levels (MCLs) (when available), or submits the data to a statistical analysis using linear regression to determine whether an upward trend exists (a coefficient > .70).

The historic analytical results have not indicated any significant concentrations above the background or MCLs. The SSL Groundwater Analytical Results (2000-2004) are attached to this report (See Appendix B). The existing chemical concentrations in the site's groundwater do not pose a threat to human health or the environment.

Site Inspection

On May 12, 2005, the SPM conducted a five-year review site inspection. The purpose of the inspection was to assess the protectiveness of the remedial measures. The climatic conditions at the time of the site visit were clear and warm with a temperature of 69 degrees Fahrenheit. Based on the site inspection, the slurry wall, the site security fence, and all the existing monitoring wells are in good condition. The remedial measures in place are protective of human health and the environment. The site is well secured and accessible with a perimeter road. The vegetation on the top of the landfill was thick and healthy. Current site photographs are attached to this report (See Appendix C).

Interviews

No site interviews were conducted due to very minimal community interest at this site.

VII. Technical Assessment

Question A: Is the remedy functioning as intended by the decision documents?

A review of the available information indicates that the remedial measures currently in place are functioning as intended by the decision documents. There was no migration of contamination from the site and the groundwater outside the slurry wall is not contaminated. For long-term protectiveness, the landfill must continue to be regulated by and in compliance with the State permit, the SSL owners must comply with closure and post-closure requirements and must implement an environmental easement/restrictive covenant that runs with the land to prohibit use of groundwater from the site, prevent interference with the slurry wall and disturbance of the final cover, and prohibit any other inappropriate action that threatens the integrity of the remedial measures currently in place and the closure and post-closure measures.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

There have been no major changes in the physical condition of the site or groundwater quality that would affect the protectiveness of the remedy. No new exposure assumptions are needed at this time.

Changes in Standards and To Be Considereds

The primary applicable relevant and appropriate requirements (ARARs) for the landfill groundwater contamination cited in the ROD have been met. All federal and state requirements are being met through State permit No. FP 49-01. No new ARARs need to be considered at this time.

Changes in Exposure Pathways, Toxicity, and Other Contaminant Characteristics

The exposure pathways assumption applicable to current and future trespassers has been effectively reduced by the site's security fence. There have been no changes in the toxicity factors for the contaminants of concern. No change to these assumptions or cleanup levels developed from them is warranted at this time. The remedy is progressing and all groundwater quality goals are being met. Monitoring will continue per the requirements of landfill permit No. FP 49-01.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

There is no new information to suggest that the selected remedial measures currently in place are not protective.

Technical Assessment Summary

Based on the review of SSL current permit requirements, the remedial measures currently in place are functioning as intended by the ROD. Based on discussions with IDEM's permit staff, the SSL operators are in compliance with permit requirements. There is no other information that calls into question the protectiveness of the remedial measures now in place in the short-term, or for the duration of the permit and the operating life of the landfill.

VIII. Issues

There are no significant issues of concern that affect the short-term protectiveness of the remedial measures currently in place as a result of this five-year review. However, the long-term protectiveness of the remedy will require the continued implementation of permit No. FP 49-01, the SSL owners' compliance with the closure and post-closure requirements and the placement of an environmental easement/restrictive covenant on the site property.

IX. Recommendations and Follow-Up Actions

IDEM staff recommend continuation of landfill activities at the site per the requirements of State permit No. FP 49-01. Additional five-year reviews are anticipated. To ensure long-term protectiveness of the remedial measures currently in place and the closure and post-closure

measures, the SSL owners will be required to implement an effective environmental easement/restrictive covenant on the site property to prohibit use of groundwater from the site, prevent interference with the slurry wall and disturbance of final cover, and prohibit any other inappropriate action that threatens the integrity of the remedial measures currently in place and the closure and post-closure measures. The SSL owners will be required to implement an effective environmental easement/restrictive covenant that runs with the land, is not hindered by prior-in-time encumbrances, provides adequate notice to future owners, and will be monitored to ensure its continued existence. Within six months of this Five-Year Review, IDEM staff will develop and submit an Institutional Control Plan (IC Plan), which will include a plan and schedule for implementing the easement/restrictive covenant described above, as well as an evaluation of the need for any additional institutional controls. Such additional institutional controls may include a notice of current and future land and groundwater use restrictions for the landfill, recorded prior to closure of the facility or the implementation of the easement/restrictive covenant, in order to provide notice of such restrictions to any prospective purchasers of the property.

X. Protectiveness Statement

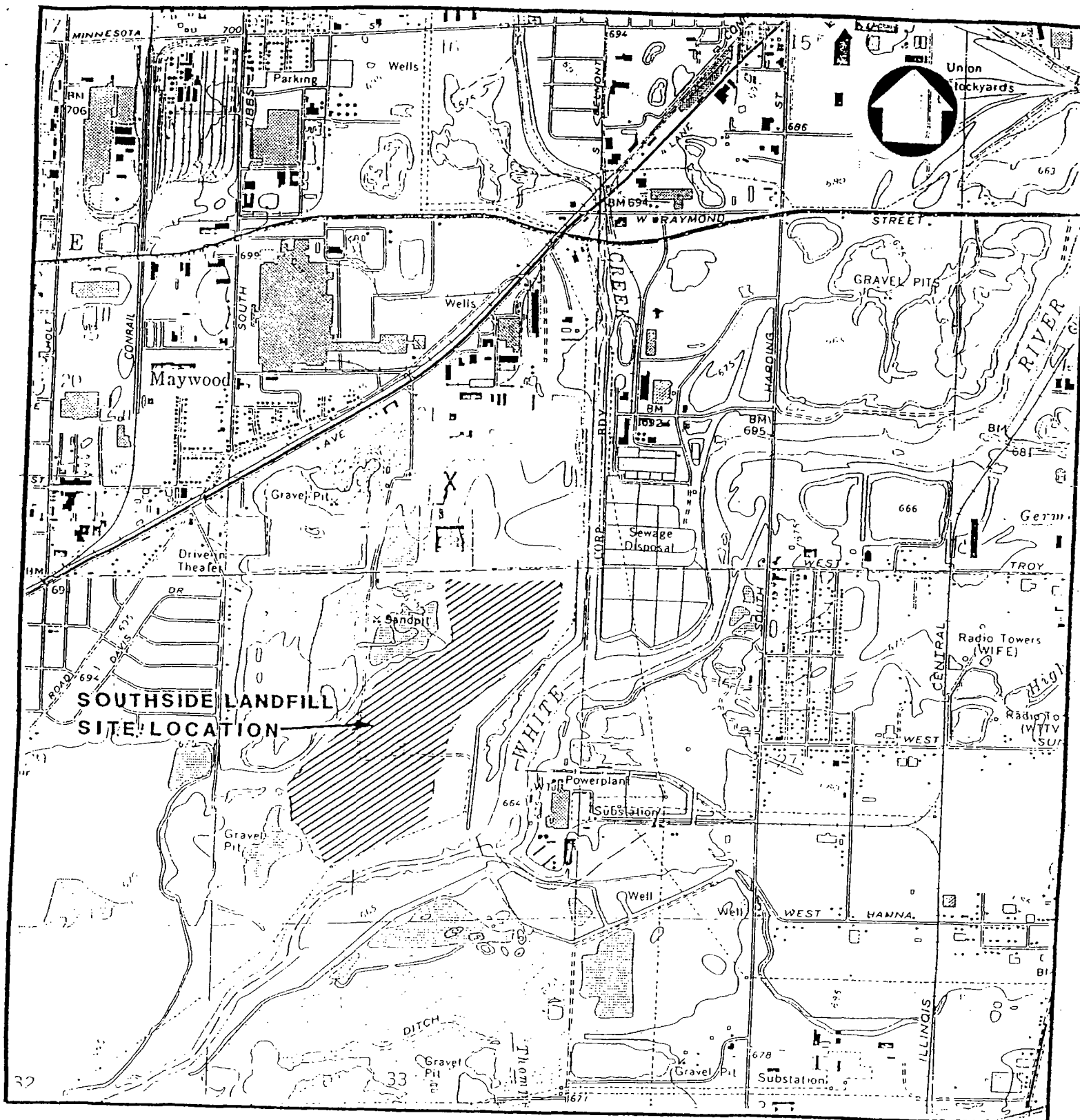
The implementation of remedial measures currently in place, which include a slurry wall, collection and disposal of leachate, and periodic groundwater monitoring per the requirements of State permit No. FP 49-01, ensure the protection of human health and the environment in the short-term and for the duration of the permit and operating life of the landfill. The long-term protectiveness requires the implementation of closure and post-closure measures, and implementation of an effective environmental easement/restrictive covenant on the site property to prohibit use of ground water from the site, prevent interferences with the slurry wall and disturbances of final cover, and prohibit any other inappropriate action that threatens the measures currently in place and closure and post-closure measures. The SSL owners will be required to implement an effective environmental easement/restrictive covenant that runs with the land, is not hindered by prior-in-time encumbrances, provides adequate notice to future owners, and will be monitored to ensure its continued existence. Within six months of this Five-Year Review, IDEM staff will develop and submit the IC Plan described in the previous section.

XI. Next Review

The next five-year review for the SSL site is required by September 2010, five years from the date of this review.

Appendix A

Site Maps



SCALE: 1 INCH 2000 FEET

TOPOGRAPHY TAKEN FROM

1980

MAYWOOD, INDIANA

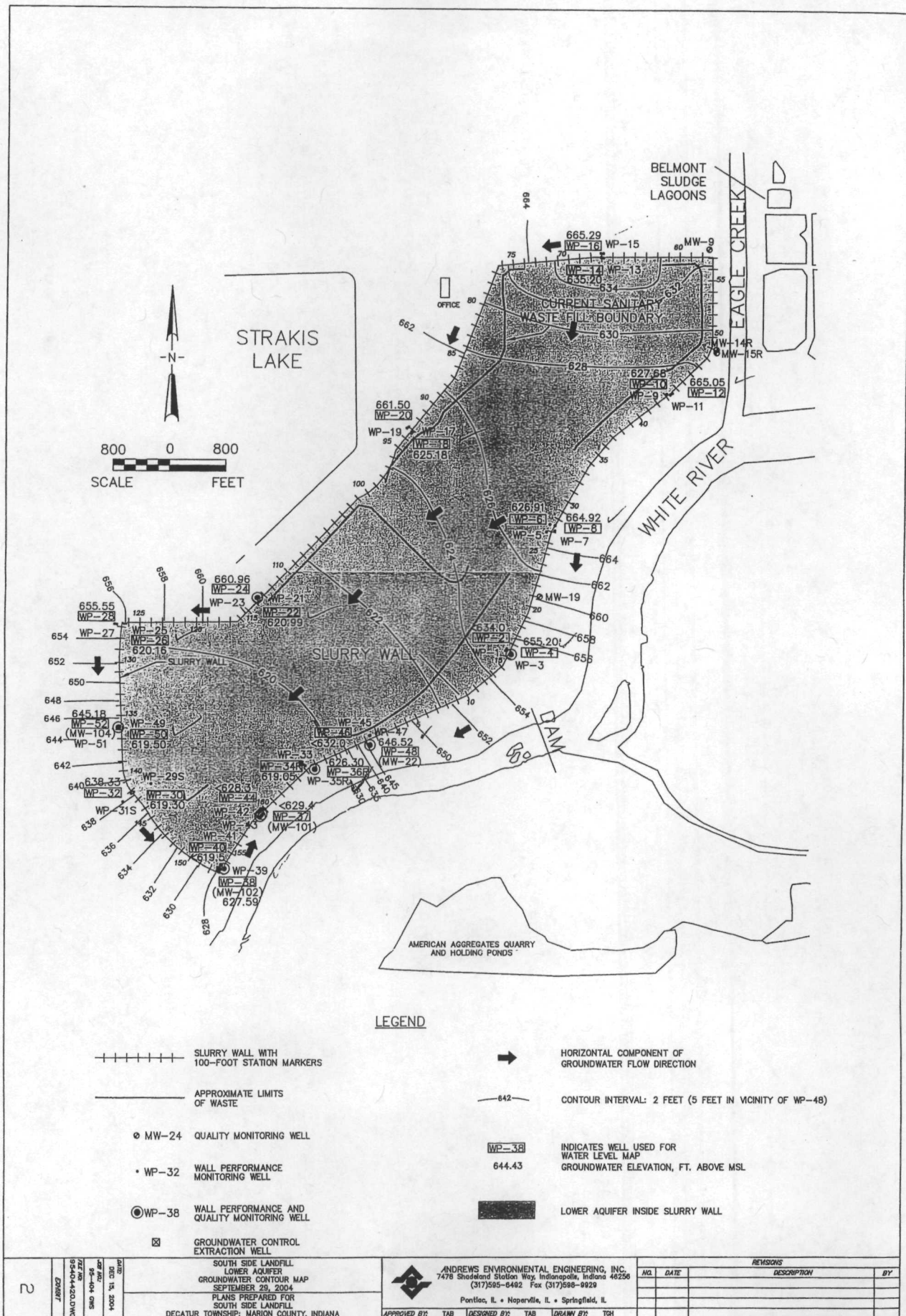
U.S.G.S. QUADRANGLES



FIGURE 1 SITE LOCATION MAP

Marion County, Indiana

Southside Sanitary Landfill Marion County, Indianapolis Monitoring Wells Location Map



Appendix B
Groundwater Analytical Results

**Southside Sanitary Landfill
Groundwater Analytical Results**

FACILITY_ID	WELL	SPECIES	SAMPLE	ANALYTICAL	UNITS	DETECTED	DETECT	ACTION
Southside			Date	Result		Yes 1, no 0	Limits	Level
Southside	MW-101	Ammonia	3/26/1997	0.2	mg/L	1	0.1	10
Southside	MW-101	Ammonia	3/18/1999	0.1	mg/L	0	0.1	
Southside	MW-101	Ammonia	9/23/1999	0.1	mg/L	0	0.1	
Southside	MW-101	Ammonia	3/23/2000	0.1	mg/L	0	0.1	
Southside	MW-101	Ammonia	9/14/2000	8.3	mg/L	1	0.1	
Southside	MW-101	Ammonia	9/26/2001	0.1	mg/L	0	0.1	
Southside	MW-101	Ammonia	3/28/2002	4.1	mg/L	1	0.1	
Southside	MW-101	Ammonia	9/23/2003	0.1	mg/L	0	0.1	
Southside	MW-101	Ammonia	3/25/2004	1	mg/L	0	1	
Southside	MW-101	Chloride	3/26/1997	46	mg/L	1	1	500
Southside	MW-101	Chloride	3/18/1999	150	mg/L	1	1	
Southside	MW-101	Chloride	9/23/1999	180	mg/L	1	1	
Southside	MW-101	Chloride	3/23/2000	160	mg/L	1	1	
Southside	MW-101	Chloride	9/14/2000	200	mg/L	1	1	
Southside	MW-101	Chloride	9/26/2001	91	mg/L	1	1	
180	MW-101	Chloride	3/28/2002	130	mg/L	1	10	
180	MW-101	Chloride	9/23/2003	35	mg/L	1	1	
180	MW-101	Chloride	3/25/2004	75.4	mg/L	1	2	
180	MW-101	Chromium (Dissolved)	3/26/1997	0.01	mg/L	0	0.01	0.1
180	MW-101	Chromium (Dissolved)	3/18/1999	0.01	mg/L	0	0.01	
180	MW-101	Chromium (Dissolved)	9/23/1999	0.01	mg/L	0	0.01	
180	MW-101	Chromium (Dissolved)	3/23/2000	0.01	mg/L	0	0.01	
180	MW-101	Chromium (Dissolved)	9/14/2000	0.01	mg/L	0	0.01	
180	MW-101	Chromium (Dissolved)	9/26/2001	0.04	mg/L	0	0.04	
180	MW-101	Chromium (Dissolved)	3/28/2002	0.04	mg/L	0	0.04	
180	MW-101	Chromium (Dissolved)	9/23/2003	0.002	mg/L	0	0.002	
180	MW-101	Chromium (Dissolved)	3/25/2004	0.02	mg/L	0	0.02	
180	MW-101	Iron (Dissolved)	3/26/1997	0.1	mg/L	0	0.1	
180	MW-101	Iron (Dissolved)	3/18/1999	0.1	mg/L	0	0.1	
180	MW-101	Iron (Dissolved)	9/23/1999	1.3	mg/L	1	0.1	
180	MW-101	Iron (Dissolved)	3/23/2000	0.1	mg/L	0	0.1	
180	MW-101	Iron (Dissolved)	9/14/2000	0.1	mg/L	0	0.1	
180	MW-101	Iron (Dissolved)	9/26/2001	0.1	mg/L	0	0.1	
180	MW-101	Iron (Dissolved)	3/28/2002	0.1	mg/L	0	0.1	
180	MW-101	Iron (Dissolved)	9/23/2003	0.1	mg/L	0	0.1	
180	MW-101	Iron (Dissolved)	3/25/2004	0.05	mg/L	0	0.05	
180	MW-101	Sulfate	3/26/1997	59	mg/L	1	5	500
180	MW-101	Sulfate	3/18/1999	140	mg/L	1	5	
180	MW-101	Sulfate	9/23/1999	190	mg/L	1	5	
180	MW-101	Sulfate	3/23/2000	93	mg/L	1	5	
180	MW-101	Sulfate	9/14/2000	77	mg/L	1	5	
180	MW-101	Sulfate	9/26/2001	87	mg/L	1	5	
180	MW-101	Sulfate	3/28/2002	110	mg/L	1	50	
180	MW-101	Sulfate	9/23/2003	49	mg/L	1	5	
180	MW-101	Sulfate	3/25/2004	64.7	mg/L	1	12.5	
180	MW-102	Ammonia	3/26/1997	0.23	mg/L	1	0.1	10
180	MW-102	Ammonia	3/18/1999	0.33	mg/L	1	0.1	
180	MW-102	Ammonia	9/23/1999	0.1	mg/L	0	0.1	
180	MW-102	Ammonia	3/23/2000	3.2	mg/L	1	0.1	
180	MW-102	Ammonia	9/14/2000	6.6	mg/L	1	0.1	

**Southside Sanitary Landfill
Groundwater Analytical Results**

180	MW-102	Ammonia	3/28/2001	0.1	mg/L	0	0.1	
180	MW-102	Ammonia	9/26/2001	0.1	mg/L	0	0.1	
180	MW-102	Ammonia	3/28/2002	3.9	mg/L	1	0.1	
180	MW-102	Ammonia	9/10/2002	3.1	mg/L	1	0.1	
180	MW-102	Ammonia	3/20/2003	0.1	mg/L	0	0.1	
180	MW-102	Ammonia	9/23/2003	0.1	mg/L	0	0.1	
180	MW-102	Ammonia	3/25/2004	1	mg/L	0	1	
180	MW-102	Ammonia	9/29/2004	1	mg/L	0	1	
180	MW-102	Chloride	3/26/1997	48	mg/L	1	1	500
180	MW-102	Chloride	3/18/1999	140	mg/L	1	1	
180	MW-102	Chloride	9/23/1999	230	mg/L	1	1	
180	MW-102	Chloride	3/23/2000	180	mg/L	1	1	
180	MW-102	Chloride	9/14/2000	170	mg/L	1	1	
180	MW-102	Chloride	3/28/2001	86	mg/L	1	1	
180	MW-102	Chloride	9/26/2001	89	mg/L	1	1	
180	MW-102	Chloride	3/28/2002	180	mg/L	1	10	
180	MW-102	Chloride	9/10/2002	210	mg/L	1	3	
180	MW-102	Chloride	3/20/2003	91	mg/L	1	1	
180	MW-102	Chloride	9/23/2003	77	mg/L	1	1	
180	MW-102	Chloride	3/25/2004	85.8	mg/L	1	2	
180	MW-102	Chloride	9/29/2004	149	mg/L	1	8	
180	MW-102	Chromium (Dissolved)	3/26/1997	0.01	mg/L	0	0.01	0.1
180	MW-102	Chromium (Dissolved)	3/18/1999	0.01	mg/L	0	0.01	
180	MW-102	Chromium (Dissolved)	9/23/1999	0.01	mg/L	0	0.01	
180	MW-102	Chromium (Dissolved)	3/23/2000	0.01	mg/L	0	0.01	
180	MW-102	Chromium (Dissolved)	9/14/2000	0.01	mg/L	0	0.01	
180	MW-102	Chromium (Dissolved)	3/28/2001	0.01	mg/L	0	0.01	
180	MW-102	Chromium (Dissolved)	9/26/2001	0.04	mg/L	0	0.04	
180	MW-102	Chromium (Dissolved)	3/28/2002	0.04	mg/L	0	0.04	
180	MW-102	Chromium (Dissolved)	9/10/2002	0.002	mg/L	0	0.002	
180	MW-102	Chromium (Dissolved)	3/20/2003	0.002	mg/L	0	0.002	
180	MW-102	Chromium (Dissolved)	9/23/2003	0.002	mg/L	0	0.002	
180	MW-102	Chromium (Dissolved)	3/25/2004	0.02	mg/L	0	0.02	
180	MW-102	Chromium (Dissolved)	9/29/2004	0.02	mg/L	0	0.02	
180	MW-102	Iron (Dissolved)	3/26/1997	0.1	mg/L	0	0.1	
180	MW-102	Iron (Dissolved)	3/18/1999	0.1	mg/L	0	0.1	
180	MW-102	Iron (Dissolved)	9/23/1999	0.26	mg/L	1	0.1	
180	MW-102	Iron (Dissolved)	3/23/2000	0.1	mg/L	0	0.1	
180	MW-102	Iron (Dissolved)	9/14/2000	1.1	mg/L	1	0.1	
180	MW-102	Iron (Dissolved)	3/28/2001	0.1	mg/L	0	0.1	
180	MW-102	Iron (Dissolved)	9/26/2001	0.1	mg/L	0	0.1	
180	MW-102	Iron (Dissolved)	3/28/2002	0.1	mg/L	0	0.1	
180	MW-102	Iron (Dissolved)	9/10/2002	0.2	mg/L	1	0.1	
180	MW-102	Iron (Dissolved)	3/20/2003	0.1	mg/L	0	0.1	
180	MW-102	Iron (Dissolved)	9/23/2003	0.1	mg/L	0	0.1	
180	MW-102	Iron (Dissolved)	3/25/2004	0.05	mg/L	0	0.05	
180	MW-102	Iron (Dissolved)	9/29/2004	0.05	mg/L	0	0.05	
180	MW-102	Sulfate	3/26/1997	55	mg/L	1	5	500
180	MW-102	Sulfate	3/18/1999	100	mg/L	1	5	
180	MW-102	Sulfate	9/23/1999	200	mg/L	1	5	
180	MW-102	Sulfate	3/23/2000	90	mg/L	1	5	
180	MW-102	Sulfate	9/14/2000	87	mg/L	1	5	
180	MW-102	Sulfate	3/28/2001	99	mg/L	1	5	

**Southside Sanitary Landfill
Groundwater Analytical Results**

180	MW-102	Sulfate	9/26/2001	90	mg/L	1	5	
180	MW-102	Sulfate	3/28/2002	95	mg/L	1	50	
180	MW-102	Sulfate	9/10/2002	81	mg/L	1	5	
180	MW-102	Sulfate	3/20/2003	72	mg/L	1	5	
180	MW-102	Sulfate	9/23/2003	67	mg/L	1	5	
180	MW-102	Sulfate	3/25/2004	73.6	mg/L	1	12.5	
180	MW-102	Sulfate	9/29/2004	134	mg/L	1	25	
180	MW-103	Ammonia	3/26/1997	0.16	mg/L	1	0.1	10
180	MW-103	Ammonia	3/18/1999	5.1	mg/L	1	0.1	
180	MW-103	Ammonia	9/23/1999	0.1	mg/L	0	0.1	
180	MW-103	Ammonia	3/23/2000	3.5	mg/L	1	0.1	
180	MW-103	Ammonia	9/14/2000	11	mg/L	1	0.1	
180	MW-103	Ammonia	3/28/2001	0.1	mg/L	0	0.1	
180	MW-103	Ammonia	9/26/2001	0.1	mg/L	0	0.1	
180	MW-103	Ammonia	3/28/2002	3.4	mg/L	1	0.1	
180	MW-103	Ammonia	9/10/2002	2.4	mg/L	1	0.1	
180	MW-103	Ammonia	3/20/2003	0.31	mg/L	1	0.1	
180	MW-103	Ammonia	9/23/2003	0.11	mg/L	1	0.1	
180	MW-103	Ammonia	3/25/2004	1	mg/L	0	1	
180	MW-103	Ammonia	9/29/2004	1	mg/L	0	1	
180	MW-103	Chloride	3/26/1997	56	mg/L	1	1	500
180	MW-103	Chloride	3/18/1999	190	mg/L	1	1	
180	MW-103	Chloride	9/23/1999	42	mg/L	1	1	
180	MW-103	Chloride	3/23/2000	160	mg/L	1	1	
180	MW-103	Chloride	9/14/2000	200	mg/L	1	1	
180	MW-103	Chloride	3/28/2001	83	mg/L	1	1	
180	MW-103	Chloride	9/26/2001	88	mg/L	1	1	
180	MW-103	Chloride	3/28/2002	140	mg/L	1	10	
180	MW-103	Chloride	9/10/2002	230	mg/L	1	3	
180	MW-103	Chloride	3/20/2003	140	mg/L	1	2	
180	MW-103	Chloride	9/23/2003	29	mg/L	1	1	
180	MW-103	Chloride	3/25/2004	72.3	mg/L	1	2	
180	MW-103	Chloride	9/29/2004	100	mg/L	1	2	
180	MW-103	Chromium (Dissolved)	3/26/1997	0.01	mg/L	0	0.01	0.1
180	MW-103	Chromium (Dissolved)	3/18/1999	0.01	mg/L	0	0.01	
180	MW-103	Chromium (Dissolved)	9/23/1999	0.01	mg/L	0	0.01	
180	MW-103	Chromium (Dissolved)	3/23/2000	0.01	mg/L	0	0.01	
180	MW-103	Chromium (Dissolved)	9/14/2000	0.01	mg/L	0	0.01	
180	MW-103	Chromium (Dissolved)	3/28/2001	0.01	mg/L	0	0.01	
180	MW-103	Chromium (Dissolved)	9/26/2001	0.04	mg/L	0	0.04	
180	MW-103	Chromium (Dissolved)	3/28/2002	0.04	mg/L	0	0.04	
180	MW-103	Chromium (Dissolved)	9/10/2002	0.002	mg/L	0	0.002	
180	MW-103	Chromium (Dissolved)	3/20/2003	0.002	mg/L	0	0.002	
180	MW-103	Chromium (Dissolved)	9/23/2003	0.002	mg/L	0	0.002	
180	MW-103	Chromium (Dissolved)	3/25/2004	0.02	mg/L	0	0.02	
180	MW-103	Chromium (Dissolved)	9/29/2004	0.02	mg/L	0	0.02	
180	MW-103	Iron (Dissolved)	3/26/1997	0.1	mg/L	0	0.1	
180	MW-103	Iron (Dissolved)	3/18/1999	0.1	mg/L	0	0.1	
180	MW-103	Iron (Dissolved)	9/23/1999	0.6	mg/L	1	0.1	
180	MW-103	Iron (Dissolved)	3/23/2000	0.1	mg/L	0	0.1	
180	MW-103	Iron (Dissolved)	9/14/2000	2.6	mg/L	1	0.1	
180	MW-103	Iron (Dissolved)	3/28/2001	0.16	mg/L	1	0.1	
180	MW-103	Iron (Dissolved)	9/26/2001	0.1	mg/L	0	0.1	

**Southside Sanitary Landfill
Groundwater Analytical Results**

180	MW-103	Iron (Dissolved)	3/28/2002	0.1	mg/L	0	0.1	
180	MW-103	Iron (Dissolved)	9/10/2002	0.1	mg/L	0	0.1	
180	MW-103	Iron (Dissolved)	3/20/2003	0.1	mg/L	0	0.1	
180	MW-103	Iron (Dissolved)	9/23/2003	0.111	mg/L	1	0.1	
180	MW-103	Iron (Dissolved)	3/25/2004	0.05	mg/L	0	0.05	
180	MW-103	Iron (Dissolved)	9/29/2004	0.05	mg/L	0	0.05	
180	MW-103	Sulfate	3/26/1997	110	mg/L	1	5	500
180	MW-103	Sulfate	3/18/1999	86	mg/L	1	5	
180	MW-103	Sulfate	9/23/1999	140	mg/L	1	5	
180	MW-103	Sulfate	3/23/2000	89	mg/L	1	5	
180	MW-103	Sulfate	9/14/2000	77	mg/L	1	5	
180	MW-103	Sulfate	3/28/2001	92	mg/L	1	5	
180	MW-103	Sulfate	9/26/2001	92	mg/L	1	5	
180	MW-103	Sulfate	3/28/2002	160	mg/L	1	50	
180	MW-103	Sulfate	9/10/2002	82	mg/L	1	5	
180	MW-103	Sulfate	3/20/2003	75	mg/L	1	5	
180	MW-103	Sulfate	9/23/2003	39	mg/L	1	5	
180	MW-103	Sulfate	3/25/2004	57.2	mg/L	1	12.5	
180	MW-103	Sulfate	9/29/2004	112	mg/L	1	12.5	
180	MW-104	Ammonia	3/26/1997	0.42	mg/L	1	0.1	10
180	MW-104	Ammonia	3/18/1999	0.3	mg/L	1	0.1	
180	MW-104	Ammonia	9/23/1999	0.21	mg/L	1	0.1	
180	MW-104	Ammonia	3/23/2000	0.28	mg/L	1	0.1	
180	MW-104	Ammonia	9/14/2000	0.35	mg/L	1	0.1	
180	MW-104	Ammonia	3/28/2001	0.28	mg/L	1	0.1	
180	MW-104	Ammonia	9/26/2001	0.23	mg/L	1	0.1	
180	MW-104	Ammonia	3/28/2002	0.36	mg/L	1	0.1	
180	MW-104	Ammonia	9/10/2002	0.1	mg/L	0	0.1	
180	MW-104	Ammonia	3/20/2003	0.2	mg/L	1	0.1	
180	MW-104	Ammonia	9/23/2003	0.33	mg/L	1	0.1	
180	MW-104	Ammonia	3/25/2004	1	mg/L	0	1	
180	MW-104	Ammonia	9/29/2004	1	mg/L	0	1	
180	MW-104	Chloride	3/26/1997	91	mg/L	1	1	500
180	MW-104	Chloride	3/18/1999	130	mg/L	1	1	
180	MW-104	Chloride	9/23/1999	110	mg/L	1	1	
180	MW-104	Chloride	3/23/2000	110	mg/L	1	1	
180	MW-104	Chloride	9/14/2000	98	mg/L	1	1	
180	MW-104	Chloride	3/28/2001	110	mg/L	1	10	
180	MW-104	Chloride	9/26/2001	130	mg/L	1	10	
180	MW-104	Chloride	3/28/2002	170	mg/L	1	10	
180	MW-104	Chloride	9/10/2002	140	mg/L	1	3	
180	MW-104	Chloride	3/20/2003	140	mg/L	1	3	
180	MW-104	Chloride	9/23/2003	140	mg/L	1	3	
180	MW-104	Chloride	3/25/2004	135	mg/L	1	4	
180	MW-104	Chloride	9/29/2004	126	mg/L	1	8	
180	MW-104	Chromium (Dissolved)	3/26/1997	0.01	mg/L	0	0.01	0.1
180	MW-104	Chromium (Dissolved)	3/18/1999	0.01	mg/L	0	0.01	
180	MW-104	Chromium (Dissolved)	9/23/1999	0.01	mg/L	0	0.01	
180	MW-104	Chromium (Dissolved)	3/23/2000	0.01	mg/L	0	0.01	
180	MW-104	Chromium (Dissolved)	9/14/2000	0.01	mg/L	0	0.01	
180	MW-104	Chromium (Dissolved)	3/28/2001	0.01	mg/L	0	0.01	
180	MW-104	Chromium (Dissolved)	9/26/2001	0.04	mg/L	0	0.04	
180	MW-104	Chromium (Dissolved)	3/28/2002	0.04	mg/L	0	0.04	

**Southside Sanitary Landfill
Groundwater Analytical Results**

180	MW-104	Chromium (Dissolved)	9/10/2002	0.002	mg/L	0	0.002	
180	MW-104	Chromium (Dissolved)	3/20/2003	0.002	mg/L	0	0.002	
180	MW-104	Chromium (Dissolved)	9/23/2003	0.002	mg/L	0	0.002	
180	MW-104	Chromium (Dissolved)	3/25/2004	0.02	mg/L	0	0.02	
180	MW-104	Chromium (Dissolved)	9/29/2004	0.02	mg/L	0	0.02	
180	MW-104	Iron (Dissolved)	3/26/1997	1.5	mg/L	1	0.1	
180	MW-104	Iron (Dissolved)	3/18/1999	1.7	mg/L	1	0.1	
180	MW-104	Iron (Dissolved)	9/23/1999	1.6	mg/L	1	0.1	
180	MW-104	Iron (Dissolved)	3/23/2000	1.8	mg/L	1	0.1	
180	MW-104	Iron (Dissolved)	9/14/2000	1.7	mg/L	1	0.1	
180	MW-104	Iron (Dissolved)	3/28/2001	1.8	mg/L	1	0.1	
180	MW-104	Iron (Dissolved)	9/26/2001	1.7	mg/L	1	0.1	
180	MW-104	Iron (Dissolved)	3/28/2002	1.59	mg/L	1	0.1	
180	MW-104	Iron (Dissolved)	9/10/2002	1.62	mg/L	1	0.1	
180	MW-104	Iron (Dissolved)	3/20/2003	1.82	mg/L	1	0.1	
180	MW-104	Iron (Dissolved)	9/23/2003	1.88	mg/L	1	0.1	
180	MW-104	Iron (Dissolved)	3/25/2004	1.68	mg/L	1	0.05	
180	MW-104	Iron (Dissolved)	9/29/2004	2.04	mg/L	1	0.05	
180	MW-104	Sulfate	3/26/1997	91	mg/L	1	5	500
180	MW-104	Sulfate	3/18/1999	87	mg/L	1	5	
180	MW-104	Sulfate	9/23/1999	100	mg/L	1	5	
180	MW-104	Sulfate	3/23/2000	110	mg/L	1	5	
180	MW-104	Sulfate	9/14/2000	50	mg/L	0	5	
180	MW-104	Sulfate	3/28/2001	94	mg/L	1	50	
180	MW-104	Sulfate	9/26/2001	110	mg/L	1	50	
180	MW-104	Sulfate	3/28/2002	190	mg/L	1	50	
180	MW-104	Sulfate	9/10/2002	120	mg/L	1	10	
180	MW-104	Sulfate	3/20/2003	120	mg/L	1	10	
180	MW-104	Sulfate	9/23/2003	120	mg/L	1	10	
180	MW-104	Sulfate	3/25/2004	123	mg/L	1	25	
180	MW-104	Sulfate	9/29/2004	111	mg/L	1	12.5	
180	MW-14R	Ammonia	3/22/1996	5.2	mg/L	1	0.1	10
180	MW-14R	Ammonia	3/24/1997	24	mg/L	1	0.1	
180	MW-14R	Ammonia	3/18/1999	2	mg/L	1	0.1	
180	MW-14R	Ammonia	9/23/1999	2	mg/L	1	0.1	
180	MW-14R	Ammonia	3/23/2000	2	mg/L	1	0.1	
180	MW-14R	Ammonia	9/14/2000	2.3	mg/L	1	0.1	
180	MW-14R	Ammonia	3/28/2001	2	mg/L	1	0.1	
180	MW-14R	Ammonia	9/26/2001	2.3	mg/L	1	0.1	
180	MW-14R	Ammonia	3/28/2002	2.6	mg/L	1	0.1	
180	MW-14R	Ammonia	9/10/2002	0.88	mg/L	1	0.1	
180	MW-14R	Ammonia	3/20/2003	1.6	mg/L	1	0.1	
180	MW-14R	Ammonia	9/23/2003	1.8	mg/L	1	0.1	
180	MW-14R	Ammonia	3/25/2004	1.6	mg/L	1	1	
180	MW-14R	Ammonia	9/29/2004	1.86	mg/L	1	1	
180	MW-14R	Chloride	3/22/1996	60	mg/L	1	1	500
180	MW-14R	Chloride	3/24/1997	40	mg/L	1	1	
180	MW-14R	Chloride	3/18/1999	47	mg/L	1	1	
180	MW-14R	Chloride	9/23/1999	81	mg/L	1	1	
180	MW-14R	Chloride	3/23/2000	63	mg/L	1	1	
180	MW-14R	Chloride	9/14/2000	45	mg/L	1	1	
180	MW-14R	Chloride	3/28/2001	41	mg/L	1	1	
180	MW-14R	Chloride	9/26/2001	33	mg/L	1	1	

**Southside Sanitary Landfill
Groundwater Analytical Results**

180	MW-14R	Chloride	3/28/2002	31	mg/L	1	1	
180	MW-14R	Chloride	9/10/2002	62	mg/L	1	1	
180	MW-14R	Chloride	3/20/2003	60	mg/L	1	1	
180	MW-14R	Chloride	9/23/2003	57	mg/L	1	1	
180	MW-14R	Chloride	3/25/2004	36.9	mg/L	1	2	
180	MW-14R	Chloride	9/29/2004	34.7	mg/L	1	2	
180	MW-14R	Chromium (Dissolved)	3/24/1997	0.01	mg/L	0	0.01	0.1
180	MW-14R	Chromium (Dissolved)	3/18/1999	0.01	mg/L	0	0.01	
180	MW-14R	Chromium (Dissolved)	9/23/1999	0.01	mg/L	0	0.01	
180	MW-14R	Chromium (Dissolved)	3/23/2000	0.01	mg/L	0	0.01	
180	MW-14R	Chromium (Dissolved)	9/14/2000	0.01	mg/L	0	0.01	
180	MW-14R	Chromium (Dissolved)	3/28/2001	0.01	mg/L	0	0.01	
180	MW-14R	Chromium (Dissolved)	9/26/2001	0.04	mg/L	0	0.04	
180	MW-14R	Chromium (Dissolved)	3/28/2002	0.04	mg/L	0	0.04	
180	MW-14R	Chromium (Dissolved)	9/10/2002	0.002	mg/L	0	0.002	
180	MW-14R	Chromium (Dissolved)	3/20/2003	0.002	mg/L	0	0.002	
180	MW-14R	Chromium (Dissolved)	9/23/2003	0.002	mg/L	0	0.002	
180	MW-14R	Chromium (Dissolved)	3/25/2004	0.02	mg/L	0	0.02	
180	MW-14R	Chromium (Dissolved)	9/29/2004	0.02	mg/L	0	0.02	
180	MW-14R	Iron (Dissolved)	3/24/1997	0.1	mg/L	0	0.1	
180	MW-14R	Iron (Dissolved)	3/18/1999	3.8	mg/L	1	0.1	
180	MW-14R	Iron (Dissolved)	9/23/1999	3.5	mg/L	1	0.1	
180	MW-14R	Iron (Dissolved)	3/23/2000	3.2	mg/L	1	0.1	
180	MW-14R	Iron (Dissolved)	9/14/2000	3.2	mg/L	1	0.1	
180	MW-14R	Iron (Dissolved)	3/28/2001	3.2	mg/L	1	0.1	
180	MW-14R	Iron (Dissolved)	9/26/2001	3.5	mg/L	1	0.1	
180	MW-14R	Iron (Dissolved)	3/28/2002	3.64	mg/L	1	0.1	
180	MW-14R	Iron (Dissolved)	9/10/2002	3.7	mg/L	1	0.1	
180	MW-14R	Iron (Dissolved)	3/20/2003	2.64	mg/L	1	0.1	
180	MW-14R	Iron (Dissolved)	9/23/2003	3.3	mg/L	1	0.1	
180	MW-14R	Iron (Dissolved)	3/25/2004	2.86	mg/L	1	0.05	
180	MW-14R	Iron (Dissolved)	9/29/2004	3.72	mg/L	1	0.05	
180	MW-14R	Sulfate	3/24/1997	66	mg/L	1	5	500
180	MW-14R	Sulfate	3/18/1999	61	mg/L	1	5	
180	MW-14R	Sulfate	9/23/1999	60	mg/L	1	5	
180	MW-14R	Sulfate	3/23/2000	64	mg/L	1	5	
180	MW-14R	Sulfate	9/14/2000	61	mg/L	1	5	
180	MW-14R	Sulfate	3/28/2001	67	mg/L	1	5	
180	MW-14R	Sulfate	9/26/2001	61	mg/L	1	5	
180	MW-14R	Sulfate	3/28/2002	71	mg/L	1	50	
180	MW-14R	Sulfate	9/10/2002	69	mg/L	1	5	
180	MW-14R	Sulfate	3/20/2003	63	mg/L	1	5	
180	MW-14R	Sulfate	9/23/2003	66	mg/L	1	5	
180	MW-14R	Sulfate	3/25/2004	58.2	mg/L	1	12.5	
180	MW-14R	Sulfate	9/29/2004	87.4	mg/L	1	12.5	
180	MW-15R	Ammonia	3/22/1996	51	mg/L	1	0.1	10
180	MW-15R	Ammonia	3/24/1997	2.2	mg/L	1	0.1	
180	MW-15R	Ammonia	3/18/1999	51	mg/L	1	0.1	
180	MW-15R	Ammonia	9/23/1999	64	mg/L	1	0.1	
180	MW-15R	Ammonia	3/23/2000	66	mg/L	1	0.1	
180	MW-15R	Ammonia	9/14/2000	68	mg/L	1	0.1	
180	MW-15R	Ammonia	3/28/2001	59	mg/L	1	1	
180	MW-15R	Ammonia	9/26/2001	67	mg/L	1	1	

**Southside Sanitary Landfill
Groundwater Analytical Results**

180	MW-15R	Ammonia	3/28/2002	58	mg/L	1	1	
180	MW-15R	Ammonia	9/10/2002	73	mg/L	1	1	
180	MW-15R	Ammonia	3/20/2003	35	mg/L	1	0.5	
180	MW-15R	Ammonia	9/23/2003	39	mg/L	1	0.5	
180	MW-15R	Ammonia	3/25/2004	58.4	mg/L	1	16	
180	MW-15R	Ammonia	9/29/2004	83.1	mg/L	1	16	
180	MW-15R	Chloride	3/22/1996	76	mg/L	1	1	500
180	MW-15R	Chloride	3/24/1997	32	mg/L	1	1	
180	MW-15R	Chloride	3/18/1999	93	mg/L	1	1	
180	MW-15R	Chloride	9/23/1999	110	mg/L	1	1	
180	MW-15R	Chloride	3/23/2000	110	mg/L	1	1	
180	MW-15R	Chloride	9/14/2000	87	mg/L	1	1	
180	MW-15R	Chloride	3/28/2001	99	mg/L	1	10	
180	MW-15R	Chloride	9/26/2001	110	mg/L	1	10	
180	MW-15R	Chloride	3/28/2002	150	mg/L	1	10	
180	MW-15R	Chloride	9/10/2002	120	mg/L	1	2	
180	MW-15R	Chloride	3/20/2003	64	mg/L	1	1	
180	MW-15R	Chloride	9/23/2003	110	mg/L	1	2	
180	MW-15R	Chloride	3/25/2004	110	mg/L	1	2	
180	MW-15R	Chloride	9/29/2004	123	mg/L	1	8	
180	MW-15R	Chromium (Dissolved)	3/24/1997	0.01	mg/L	0	0.01	0.1
180	MW-15R	Chromium (Dissolved)	3/18/1999	0.01	mg/L	0	0.01	
180	MW-15R	Chromium (Dissolved)	9/23/1999	0.01	mg/L	0	0.01	
180	MW-15R	Chromium (Dissolved)	3/23/2000	0.01	mg/L	0	0.01	
180	MW-15R	Chromium (Dissolved)	9/14/2000	0.01	mg/L	0	0.01	
180	MW-15R	Chromium (Dissolved)	3/28/2001	0.01	mg/L	0	0.01	
180	MW-15R	Chromium (Dissolved)	9/26/2001	0.04	mg/L	0	0.04	
180	MW-15R	Chromium (Dissolved)	3/28/2002	0.04	mg/L	0	0.04	
180	MW-15R	Chromium (Dissolved)	9/10/2002	0.002	mg/L	0	0.002	
180	MW-15R	Chromium (Dissolved)	3/20/2003	0.002	mg/L	0	0.002	
180	MW-15R	Chromium (Dissolved)	9/23/2003	0.002	mg/L	0	0.002	
180	MW-15R	Chromium (Dissolved)	3/25/2004	0.02	mg/L	0	0.02	
180	MW-15R	Chromium (Dissolved)	9/29/2004	0.02	mg/L	0	0.02	
180	MW-15R	Iron (Dissolved)	3/24/1997	1.7	mg/L	1	0.1	
180	MW-15R	Iron (Dissolved)	3/18/1999	0.1	mg/L	0	0.1	
180	MW-15R	Iron (Dissolved)	9/23/1999	0.41	mg/L	1	0.1	
180	MW-15R	Iron (Dissolved)	3/23/2000	1.2	mg/L	1	0.1	
180	MW-15R	Iron (Dissolved)	9/14/2000	1.6	mg/L	1	0.1	
180	MW-15R	Iron (Dissolved)	3/28/2001	0.24	mg/L	1	0.1	
180	MW-15R	Iron (Dissolved)	9/26/2001	0.55	mg/L	1	0.1	
180	MW-15R	Iron (Dissolved)	3/28/2002	0.1	mg/L	0	0.1	
180	MW-15R	Iron (Dissolved)	9/10/2002	0.19	mg/L	1	0.1	
180	MW-15R	Iron (Dissolved)	3/20/2003	0.199	mg/L	1	0.1	
180	MW-15R	Iron (Dissolved)	9/23/2003	0.1	mg/L	0	0.1	
180	MW-15R	Iron (Dissolved)	3/25/2004	0.05	mg/L	0	0.05	
180	MW-15R	Iron (Dissolved)	9/29/2004	0.0538	mg/L	1	0.05	
180	MW-15R	Sulfate	3/24/1997	53	mg/L	1	5	500
180	MW-15R	Sulfate	3/18/1999	70	mg/L	1	5	
180	MW-15R	Sulfate	9/23/1999	67	mg/L	1	5	
180	MW-15R	Sulfate	3/23/2000	83	mg/L	1	5	
180	MW-15R	Sulfate	9/14/2000	83	mg/L	1	5	
180	MW-15R	Sulfate	3/28/2001	95	mg/L	1	5	
180	MW-15R	Sulfate	9/26/2001	83	mg/L	1	5	

**Southside Sanitary Landfill
Groundwater Analytical Results**

180	MW-15R	Sulfate	3/28/2002	100	mg/L	1	50	
180	MW-15R	Sulfate	9/10/2002	89	mg/L	1	5	
180	MW-15R	Sulfate	3/20/2003	98	mg/L	1	5	
180	MW-15R	Sulfate	9/23/2003	88	mg/L	1	5	
180	MW-15R	Sulfate	3/25/2004	83.8	mg/L	1	12.5	
180	MW-15R	Sulfate	9/29/2004	86.4	mg/L	1	12.5	
180	MW-21	Ammonia	3/12/1992	2.3	mg/L	1	0.05	10
180	MW-21	Ammonia	9/24/1992	1.4	mg/L	1	0.1	
180	MW-21	Ammonia	3/26/1993	2.2	mg/L	1	0.1	
180	MW-21	Ammonia	9/22/1994	3.77	mg/L	1	0.02	
180	MW-21	Ammonia	3/30/1995	4	mg/L	1	0.1	
180	MW-21	Ammonia	9/25/1995	9	mg/L	1	0.1	
180	MW-21	Ammonia	3/22/1996	4.5	mg/L	1	0.1	
180	MW-21	Ammonia	3/24/1997	4.6	mg/L	1	0.1	
180	MW-21	Ammonia	3/18/1999	4.6	mg/L	1	0.1	
180	MW-21	Ammonia	9/23/1999	4	mg/L	1	0.1	
180	MW-21	Ammonia	3/23/2000	4.4	mg/L	1	0.1	
180	MW-21	Ammonia	9/14/2000	3.4	mg/L	1	0.1	
180	MW-21	Ammonia	3/28/2001	3.1	mg/L	1	0.1	
180	MW-21	Ammonia	9/26/2001	2.7	mg/L	1	0.1	
180	MW-21	Ammonia	3/28/2002	3.8	mg/L	1	0.1	
180	MW-21	Ammonia	9/10/2002	1.2	mg/L	1	0.1	
180	MW-21	Ammonia	3/20/2003	2.8	mg/L	1	0.1	
180	MW-21	Ammonia	9/23/2003	3.8	mg/L	1	0.1	
180	MW-21	Ammonia	3/25/2004	4.07	mg/L	1	1	
180	MW-21	Ammonia	9/29/2004	4.3	mg/L	1	1	
180	MW-21	Chloride	9/26/1989	42	mg/L	1	0	500
180	MW-21	Chloride	3/12/1992	88	mg/L	1	5	
180	MW-21	Chloride	9/24/1992	60	mg/L	1	2	
180	MW-21	Chloride	3/26/1993	51	mg/L	1	2	
180	MW-21	Chloride	9/22/1994	67	mg/L	1	1	
180	MW-21	Chloride	3/30/1995	96	mg/L	1	1	
180	MW-21	Chloride	9/25/1995	86	mg/L	1	1	
180	MW-21	Chloride	3/22/1996	100	mg/L	1	1	
180	MW-21	Chloride	3/24/1997	92	mg/L	1	1	
180	MW-21	Chloride	3/18/1999	97	mg/L	1	1	
180	MW-21	Chloride	9/23/1999	98	mg/L	1	1	
180	MW-21	Chloride	3/23/2000	150	mg/L	1	1	
180	MW-21	Chloride	9/14/2000	120	mg/L	1	1	
180	MW-21	Chloride	3/28/2001	87	mg/L	1	10	
180	MW-21	Chloride	9/26/2001	98	mg/L	1	1	
180	MW-21	Chloride	3/28/2002	91	mg/L	1	1	
180	MW-21	Chloride	9/10/2002	81	mg/L	1	1	
180	MW-21	Chloride	3/20/2003	82	mg/L	1	1	
180	MW-21	Chloride	9/23/2003	85	mg/L	1	1	
180	MW-21	Chloride	3/25/2004	67.1	mg/L	1	2	
180	MW-21	Chloride	9/29/2004	76.1	mg/L	1	2	
180	MW-21	Chromium (Dissolved)	3/24/1997	0.01	mg/L	0	0.01	0.1
180	MW-21	Chromium (Dissolved)	3/18/1999	0.01	mg/L	0	0.01	
180	MW-21	Chromium (Dissolved)	9/23/1999	0.01	mg/L	0	0.01	
180	MW-21	Chromium (Dissolved)	3/23/2000	0.01	mg/L	0	0.01	
180	MW-21	Chromium (Dissolved)	9/14/2000	0.01	mg/L	0	0.01	
180	MW-21	Chromium (Dissolved)	3/28/2001	0.01	mg/L	0	0.01	

**Southside Sanitary Landfill
Groundwater Analytical Results**

180	MW-21	Chromium (Dissolved)	9/26/2001	0.04	mg/L	0	0.04	
180	MW-21	Chromium (Dissolved)	3/28/2002	0.04	mg/L	0	0.04	
180	MW-21	Chromium (Dissolved)	9/10/2002	0.002	mg/L	0	0.002	
180	MW-21	Chromium (Dissolved)	3/20/2003	0.002	mg/L	0	0.002	
180	MW-21	Chromium (Dissolved)	9/23/2003	0.002	mg/L	0	0.002	
180	MW-21	Chromium (Dissolved)	3/25/2004	0.02	mg/L	0	0.02	
180	MW-21	Chromium (Dissolved)	9/29/2004	0.02	mg/L	0	0.02	
180	MW-21	Iron (Dissolved)	3/24/1997	3	mg/L	1	0.1	
180	MW-21	Iron (Dissolved)	3/18/1999	5.3	mg/L	1	0.1	
180	MW-21	Iron (Dissolved)	9/23/1999	4.5	mg/L	1	0.1	
180	MW-21	Iron (Dissolved)	3/23/2000	6.1	mg/L	1	0.1	
180	MW-21	Iron (Dissolved)	9/14/2000	5	mg/L	1	0.1	
180	MW-21	Iron (Dissolved)	3/28/2001	5	mg/L	1	0.1	
180	MW-21	Iron (Dissolved)	9/26/2001	4.9	mg/L	1	0.1	
180	MW-21	Iron (Dissolved)	3/28/2002	5.25	mg/L	1	0.1	
180	MW-21	Iron (Dissolved)	9/10/2002	5.69	mg/L	1	0.1	
180	MW-21	Iron (Dissolved)	3/20/2003	5.94	mg/L	1	0.1	
180	MW-21	Iron (Dissolved)	9/23/2003	4.68	mg/L	1	0.1	
180	MW-21	Iron (Dissolved)	3/25/2004	4.11	mg/L	1	0.05	
180	MW-21	Iron (Dissolved)	9/29/2004	4.79	mg/L	1	0.05	
180	MW-21	Sulfate	3/24/1997	71	mg/L	1	5	500
180	MW-21	Sulfate	3/18/1999	82	mg/L	1	5	
180	MW-21	Sulfate	9/23/1999	80	mg/L	1	5	
180	MW-21	Sulfate	3/23/2000	100	mg/L	1	5	
180	MW-21	Sulfate	9/14/2000	76	mg/L	1	5	
180	MW-21	Sulfate	3/28/2001	98	mg/L	1	5	
180	MW-21	Sulfate	9/26/2001	80	mg/L	1	5	
180	MW-21	Sulfate	3/28/2002	71	mg/L	1	5	
180	MW-21	Sulfate	9/10/2002	72	mg/L	1	5	
180	MW-21	Sulfate	3/20/2003	71	mg/L	1	5	
180	MW-21	Sulfate	9/23/2003	74	mg/L	1	5	
180	MW-21	Sulfate	3/25/2004	66.6	mg/L	1	12.5	
180	MW-21	Sulfate	9/29/2004	87.4	mg/L	1	12.5	
180	MW-23	Ammonia	3/12/1992	0.1	mg/L	1	0.05	10
180	MW-23	Ammonia	9/24/1992	0.1	mg/L	0	0.1	
180	MW-23	Ammonia	3/26/1993	0.21	mg/L	1	0.1	
180	MW-23	Ammonia	9/27/1994	0.03	mg/L	1	0.02	
180	MW-23	Ammonia	3/31/1995	0.1	mg/L	0	0.1	
180	MW-23	Ammonia	9/26/1995	0.18	mg/L	1	0.1	
180	MW-23	Ammonia	3/22/1996	0.39	mg/L	1	0.1	
180	MW-23	Ammonia	3/24/1997	0.1	mg/L	0	0.1	
180	MW-23	Ammonia	3/18/1999	0.1	mg/L	0	0.1	
180	MW-23	Ammonia	9/23/1999	0.1	mg/L	0	0.1	
180	MW-23	Ammonia	3/23/2000	0.1	mg/L	0	0.1	
180	MW-23	Ammonia	9/14/2000	0.1	mg/L	0	0.1	
180	MW-23	Ammonia	3/28/2001	0.1	mg/L	0	0.1	
180	MW-23	Ammonia	9/26/2001	0.1	mg/L	0	0.1	
180	MW-23	Ammonia	3/28/2002	0.1	mg/L	0	0.1	
180	MW-23	Ammonia	9/10/2002	0.1	mg/L	0	0.1	
180	MW-23	Ammonia	3/20/2003	0.1	mg/L	0	0.1	
180	MW-23	Ammonia	9/23/2003	0.1	mg/L	0	0.1	
180	MW-23	Ammonia	3/25/2004	1	mg/L	0	1	
180	MW-23	Ammonia	9/29/2004	1	mg/L	0	1	

**Southside Sanitary Landfill
Groundwater Analytical Results**

180	MW-23	Chloride	9/26/1989	6	mg/L	1	0	500
180	MW-23	Chloride	3/12/1992	88	mg/L	1	5	
180	MW-23	Chloride	9/24/1992	45	mg/L	1	2	
180	MW-23	Chloride	3/26/1993	49	mg/L	1	2	
180	MW-23	Chloride	9/27/1994	94	mg/L	1	1	
180	MW-23	Chloride	3/31/1995	76	mg/L	1	1	
180	MW-23	Chloride	9/26/1995	49	mg/L	1	1	
180	MW-23	Chloride	3/22/1996	85	mg/L	1	1	
180	MW-23	Chloride	3/24/1997	41	mg/L	1	1	
180	MW-23	Chloride	3/18/1999	52	mg/L	1	1	
180	MW-23	Chloride	9/23/1999	110	mg/L	1	1	
180	MW-23	Chloride	3/23/2000	190	mg/L	1	1	
180	MW-23	Chloride	9/14/2000	52	mg/L	1	1	
180	MW-23	Chloride	3/28/2001	83	mg/L	1	1	
180	MW-23	Chloride	9/26/2001	74	mg/L	1	1	
180	MW-23	Chloride	3/28/2002	91	mg/L	1	1	
180	MW-23	Chloride	9/10/2002	40	mg/L	1	1	
180	MW-23	Chloride	3/20/2003	130	mg/L	1	2	
180	MW-23	Chloride	9/23/2003	39	mg/L	1	1	
180	MW-23	Chloride	3/25/2004	92.9	mg/L	1	2	
180	MW-23	Chloride	9/29/2004	84.6	mg/L	1	2	
180	MW-23	Chromium (Dissolved)	3/24/1997	0.01	mg/L	0	0.01	0.1
180	MW-23	Chromium (Dissolved)	3/18/1999	0.01	mg/L	0	0.01	
180	MW-23	Chromium (Dissolved)	9/23/1999	0.01	mg/L	0	0.01	
180	MW-23	Chromium (Dissolved)	3/23/2000	0.01	mg/L	0	0.01	
180	MW-23	Chromium (Dissolved)	9/14/2000	0.01	mg/L	0	0.01	
180	MW-23	Chromium (Dissolved)	3/28/2001	0.01	mg/L	0	0.01	
180	MW-23	Chromium (Dissolved)	9/26/2001	0.04	mg/L	0	0.04	
180	MW-23	Chromium (Dissolved)	3/28/2002	0.04	mg/L	0	0.04	
180	MW-23	Chromium (Dissolved)	9/10/2002	0.002	mg/L	0	0.002	
180	MW-23	Chromium (Dissolved)	3/20/2003	0.002	mg/L	0	0.002	
180	MW-23	Chromium (Dissolved)	9/23/2003	0.002	mg/L	0	0.002	
180	MW-23	Chromium (Dissolved)	3/25/2004	0.02	mg/L	0	0.02	
180	MW-23	Chromium (Dissolved)	9/29/2004	0.02	mg/L	0	0.02	
180	MW-23	Iron (Dissolved)	3/24/1997	0.1	mg/L	0	0.1	
180	MW-23	Iron (Dissolved)	3/18/1999	0.1	mg/L	0	0.1	
180	MW-23	Iron (Dissolved)	9/23/1999	0.1	mg/L	0	0.1	
180	MW-23	Iron (Dissolved)	3/23/2000	0.1	mg/L	0	0.1	
180	MW-23	Iron (Dissolved)	9/14/2000	0.1	mg/L	0	0.1	
180	MW-23	Iron (Dissolved)	3/28/2001	0.1	mg/L	0	0.1	
180	MW-23	Iron (Dissolved)	9/26/2001	0.1	mg/L	0	0.1	
180	MW-23	Iron (Dissolved)	3/28/2002	5.2	mg/L	1	1	
180	MW-23	Iron (Dissolved)	9/10/2002	0.1	mg/L	0	0.1	
180	MW-23	Iron (Dissolved)	3/20/2003	0.1	mg/L	0	0.1	
180	MW-23	Iron (Dissolved)	9/23/2003	0.1	mg/L	0	0.1	
180	MW-23	Iron (Dissolved)	3/25/2004	0.05	mg/L	0	0.05	
180	MW-23	Iron (Dissolved)	9/29/2004	0.05	mg/L	0	0.05	
180	MW-23	Sulfate	3/24/1997	73	mg/L	1	5	500
180	MW-23	Sulfate	3/18/1999	93	mg/L	1	5	
180	MW-23	Sulfate	9/23/1999	96	mg/L	1	5	
180	MW-23	Sulfate	3/23/2000	170	mg/L	1	5	
180	MW-23	Sulfate	9/14/2000	88	mg/L	1	5	
180	MW-23	Sulfate	3/28/2001	86	mg/L	1	5	

**Southside Sanitary Landfill
Groundwater Analytical Results**

180	MW-23	Sulfate	9/26/2001	99	mg/L	1	5	
180	MW-23	Sulfate	3/28/2002	69	mg/L	1	5	
180	MW-23	Sulfate	9/10/2002	110	mg/L	1	10	
180	MW-23	Sulfate	3/20/2003	82	mg/L	1	5	
180	MW-23	Sulfate	9/23/2003	89	mg/L	1	10	
180	MW-23	Sulfate	3/25/2004	79.9	mg/L	1	12.5	
180	MW-23	Sulfate	9/29/2004	128	mg/L	1	25	
180	MW-24	Ammonia	3/11/1992	0.34	mg/L	1	0.05	10
180	MW-24	Ammonia	9/25/1992	0.26	mg/L	1	0.1	
180	MW-24	Ammonia	3/25/1993	0.2	mg/L	1	0.1	
180	MW-24	Ammonia	9/23/1994	0.13	mg/L	1	0.1	
180	MW-24	Ammonia	3/31/1995	0.12	mg/L	1	0.1	
180	MW-24	Ammonia	9/26/1995	0.2	mg/L	1	0.1	
180	MW-24	Ammonia	3/22/1996	0.15	mg/L	1	0.1	
180	MW-24	Ammonia	3/27/1997	1.7	mg/L	1	0.1	
180	MW-24	Ammonia	3/18/1999	5.2	mg/L	1	0.1	
180	MW-24	Ammonia	3/23/2000	5.4	mg/L	1	0.1	
180	MW-24	Ammonia	9/14/2000	11	mg/L	1	0.1	
180	MW-24	Ammonia	3/28/2001	1.3	mg/L	1	0.1	
180	MW-24	Ammonia	9/26/2001	0.1	mg/L	0	0.1	
180	MW-24	Ammonia	3/28/2002	3.4	mg/L	1	0.1	
180	MW-24	Ammonia	9/10/2002	3.8	mg/L	1	0.1	
180	MW-24	Chloride	9/27/1989	70	mg/L	1	0	500
180	MW-24	Chloride	3/11/1992	42	mg/L	1	5	
180	MW-24	Chloride	9/25/1992	48	mg/L	1	2	
180	MW-24	Chloride	3/25/1993	44	mg/L	1	2	
180	MW-24	Chloride	9/23/1994	36	mg/L	1	1	
180	MW-24	Chloride	3/31/1995	40	mg/L	1	1	
180	MW-24	Chloride	9/26/1995	51	mg/L	1	1	
180	MW-24	Chloride	3/22/1996	81	mg/L	1	1	
180	MW-24	Chloride	3/27/1997	63	mg/L	1	1	
180	MW-24	Chloride	3/18/1999	190	mg/L	1	1	
180	MW-24	Chloride	3/23/2000	160	mg/L	1	1	
180	MW-24	Chloride	9/14/2000	190	mg/L	1	1	
180	MW-24	Chloride	3/28/2001	95	mg/L	1	1	
180	MW-24	Chloride	9/26/2001	88	mg/L	1	1	
180	MW-24	Chloride	3/28/2002	140	mg/L	1	10	
180	MW-24	Chloride	9/10/2002	240	mg/L	1	3	
180	MW-24	Chromium (Dissolved)	3/27/1997	0.01	mg/L	0	0.01	0.1
180	MW-24	Chromium (Dissolved)	3/18/1999	0.016	mg/L	1	0.01	
180	MW-24	Chromium (Dissolved)	3/23/2000	0.01	mg/L	0	0.01	
180	MW-24	Chromium (Dissolved)	9/14/2000	0.01	mg/L	0	0.01	
180	MW-24	Chromium (Dissolved)	3/28/2001	0.01	mg/L	0	0.01	
180	MW-24	Chromium (Dissolved)	9/26/2001	0.04	mg/L	0	0.04	
180	MW-24	Chromium (Dissolved)	3/28/2002	0.04	mg/L	0	0.04	
180	MW-24	Chromium (Dissolved)	9/10/2002	0.002	mg/L	0	0.002	
180	MW-24	Iron (Dissolved)	3/27/1997	0.1	mg/L	0	0.1	
180	MW-24	Iron (Dissolved)	3/18/1999	0.1	mg/L	0	0.1	
180	MW-24	Iron (Dissolved)	3/23/2000	0.1	mg/L	0	0.1	
180	MW-24	Iron (Dissolved)	9/14/2000	5.9	mg/L	1	0.1	
180	MW-24	Iron (Dissolved)	3/28/2001	0.1	mg/L	0	0.1	
180	MW-24	Iron (Dissolved)	9/26/2001	0.1	mg/L	0	0.1	
180	MW-24	Iron (Dissolved)	3/28/2002	0.1	mg/L	0	0.1	

**Southside Sanitary Landfill
Groundwater Analytical Results**

180	MW-24	Iron (Dissolved)	9/10/2002	0.1	mg/L	0	0.1	
180	MW-24	Sulfate	3/27/1997	82	mg/L	1	5	500
180	MW-24	Sulfate	3/18/1999	87	mg/L	1	5	
180	MW-24	Sulfate	3/23/2000	83	mg/L	1	5	
180	MW-24	Sulfate	9/14/2000	79	mg/L	1	5	
180	MW-24	Sulfate	3/28/2001	93	mg/L	1	5	
180	MW-24	Sulfate	9/26/2001	89	mg/L	1	5	
180	MW-24	Sulfate	3/28/2002	110	mg/L	1	50	
180	MW-24	Sulfate	9/10/2002	71	mg/L	1	5	
180	MW-25	Ammonia	3/12/1992	0.1	mg/L	1	0.05	10
180	MW-25	Ammonia	9/25/1992	0.1	mg/L	0	0.1	
180	MW-25	Ammonia	3/26/1993	0.23	mg/L	1	0.1	
180	MW-25	Ammonia	9/27/1994	0.02	mg/L	0	0.02	
180	MW-25	Ammonia	3/30/1995	0.1	mg/L	0	0.1	
180	MW-25	Ammonia	9/26/1995	0.23	mg/L	1	0.1	
180	MW-25	Ammonia	3/22/1996	0.13	mg/L	1	0.1	
180	MW-25	Ammonia	3/26/1997	0.87	mg/L	1	0.1	
180	MW-25	Ammonia	3/18/1999	0.34	mg/L	1	0.1	
180	MW-25	Ammonia	9/23/1999	0.2	mg/L	1	0.1	
180	MW-25	Ammonia	3/23/2000	0.22	mg/L	1	0.1	
180	MW-25	Ammonia	9/14/2000	0.18	mg/L	1	0.1	
180	MW-25	Ammonia	3/28/2001	0.22	mg/L	1	0.1	
180	MW-25	Ammonia	9/26/2001	0.11	mg/L	1	0.1	
180	MW-25	Ammonia	3/28/2002	0.43	mg/L	1	0.1	
180	MW-25	Ammonia	9/10/2002	0.1	mg/L	0	0.1	
180	MW-25	Ammonia	3/20/2003	0.15	mg/L	1	0.1	
180	MW-25	Ammonia	9/23/2003	0.1	mg/L	0	0.1	
180	MW-25	Ammonia	3/25/2004	1	mg/L	0	1	
180	MW-25	Ammonia	9/29/2004	1	mg/L	0	1	
180	MW-25	Chloride	9/27/1989	82	mg/L	1	0	500
180	MW-25	Chloride	3/12/1992	88	mg/L	1	5	
180	MW-25	Chloride	9/25/1992	80	mg/L	1	2	
180	MW-25	Chloride	3/26/1993	81	mg/L	1	2	
180	MW-25	Chloride	9/27/1994	86	mg/L	1	1	
180	MW-25	Chloride	3/30/1995	103	mg/L	1	1	
180	MW-25	Chloride	9/26/1995	56	mg/L	1	1	
180	MW-25	Chloride	3/22/1996	71	mg/L	1	1	
180	MW-25	Chloride	3/26/1997	89	mg/L	1	1	
180	MW-25	Chloride	3/18/1999	180	mg/L	1	1	
180	MW-25	Chloride	9/23/1999	140	mg/L	1	1	
180	MW-25	Chloride	3/23/2000	140	mg/L	1	1	
180	MW-25	Chloride	9/14/2000	110	mg/L	1	1	
180	MW-25	Chloride	3/28/2001	120	mg/L	1	10	
180	MW-25	Chloride	9/26/2001	100	mg/L	1	10	
180	MW-25	Chloride	3/28/2002	140	mg/L	1	10	
180	MW-25	Chloride	9/10/2002	150	mg/L	1	5	
180	MW-25	Chloride	3/20/2003	160	mg/L	1	2	
180	MW-25	Chloride	9/23/2003	150	mg/L	1	3	
180	MW-25	Chloride	3/25/2004	145	mg/L	1	8	
180	MW-25	Chloride	9/29/2004	136	mg/L	1	8	
180	MW-25	Chromium (Dissolved)	3/26/1997	0.01	mg/L	0	0.01	0.1
180	MW-25	Chromium (Dissolved)	3/18/1999	0.01	mg/L	0	0.01	
180	MW-25	Chromium (Dissolved)	9/23/1999	0.01	mg/L	0	0.01	

**Southside Sanitary Landfill
Groundwater Analytical Results**

180	MW-25	Chromium (Dissolved)	3/23/2000	0.01	mg/L	0	0.01	
180	MW-25	Chromium (Dissolved)	9/14/2000	0.01	mg/L	0	0.01	
180	MW-25	Chromium (Dissolved)	3/28/2001	0.01	mg/L	0	0.01	
180	MW-25	Chromium (Dissolved)	9/26/2001	0.04	mg/L	0	0.04	
180	MW-25	Chromium (Dissolved)	3/28/2002	0.04	mg/L	0	0.04	
180	MW-25	Chromium (Dissolved)	9/10/2002	0.002	mg/L	0	0.002	
180	MW-25	Chromium (Dissolved)	3/20/2003	0.002	mg/L	0	0.002	
180	MW-25	Chromium (Dissolved)	9/23/2003	0.002	mg/L	0	0.002	
180	MW-25	Chromium (Dissolved)	3/25/2004	0.02	mg/L	0	0.02	
180	MW-25	Chromium (Dissolved)	9/29/2004	0.02	mg/L	0	0.02	
180	MW-25	Iron (Dissolved)	3/26/1997	0.1	mg/L	0	0.1	
180	MW-25	Iron (Dissolved)	3/18/1999	0.1	mg/L	0	0.1	
180	MW-25	Iron (Dissolved)	9/23/1999	0.1	mg/L	0	0.1	
180	MW-25	Iron (Dissolved)	3/23/2000	0.1	mg/L	0	0.1	
180	MW-25	Iron (Dissolved)	9/14/2000	0.1	mg/L	0	0.1	
180	MW-25	Iron (Dissolved)	3/28/2001	0.1	mg/L	0	0.1	
180	MW-25	Iron (Dissolved)	9/26/2001	0.1	mg/L	0	0.1	
180	MW-25	Iron (Dissolved)	3/28/2002	0.1	mg/L	0	0.1	
180	MW-25	Iron (Dissolved)	9/10/2002	0.1	mg/L	0	0.1	
180	MW-25	Iron (Dissolved)	3/20/2003	0.1	mg/L	0	0.1	
180	MW-25	Iron (Dissolved)	9/23/2003	0.1	mg/L	0	0.1	
180	MW-25	Iron (Dissolved)	3/25/2004	0.05	mg/L	0	0.05	
180	MW-25	Iron (Dissolved)	9/29/2004	0.05	mg/L	0	0.05	
180	MW-25	Sulfate	3/26/1997	79	mg/L	1	5	500
180	MW-25	Sulfate	3/18/1999	76	mg/L	1	5	
180	MW-25	Sulfate	9/23/1999	96	mg/L	1	5	
180	MW-25	Sulfate	3/23/2000	110	mg/L	1	5	
180	MW-25	Sulfate	9/14/2000	50	mg/L	0	5	
180	MW-25	Sulfate	3/28/2001	160	mg/L	1	50	
180	MW-25	Sulfate	9/26/2001	140	mg/L	1	50	
180	MW-25	Sulfate	3/28/2002	200	mg/L	1	50	
180	MW-25	Sulfate	9/10/2002	110	mg/L	1	10	
180	MW-25	Sulfate	3/20/2003	100	mg/L	1	10	
180	MW-25	Sulfate	9/23/2003	100	mg/L	1	10	
180	MW-25	Sulfate	3/25/2004	110	mg/L	1	12.5	
180	MW-25	Sulfate	9/29/2004	97.2	mg/L	1	12.5	
180	MW-9	Ammonia	12/20/1991	2.5	mg/L	1	0.05	10
180	MW-9	Ammonia	3/11/1992	2.3	mg/L	1	0.05	
180	MW-9	Ammonia	9/24/1992	1.4	mg/L	1	0.1	
180	MW-9	Ammonia	3/25/1993	2.2	mg/L	1	0.1	
180	MW-9	Ammonia	9/22/1994	1.84	mg/L	1	0.02	
180	MW-9	Ammonia	3/31/1995	2.1	mg/L	1	0.1	
180	MW-9	Ammonia	9/25/1995	2.7	mg/L	1	0.1	
180	MW-9	Ammonia	3/22/1996	1.8	mg/L	1	0.1	
180	MW-9	Ammonia	3/24/1997	1.5	mg/L	1	0.1	
180	MW-9	Ammonia	3/18/1999	0.98	mg/L	1	0.1	
180	MW-9	Ammonia	9/23/1999	0.46	mg/L	1	0.1	
180	MW-9	Ammonia	3/23/2000	0.46	mg/L	1	0.1	
180	MW-9	Ammonia	9/14/2000	0.71	mg/L	1	0.1	
180	MW-9	Ammonia	3/28/2001	0.74	mg/L	1	0.1	
180	MW-9	Ammonia	9/26/2001	0.5	mg/L	1	0.1	
180	MW-9	Ammonia	3/28/2002	0.53	mg/L	1	0.1	
180	MW-9	Ammonia	9/10/2002	0.1	mg/L	0	0.1	

**Southside Sanitary Landfill
Groundwater Analytical Results**

180	MW-9	Ammonia	3/20/2003	0.34	mg/L	1	0.1	
180	MW-9	Ammonia	9/23/2003	0.59	mg/L	1	0.1	
180	MW-9	Ammonia	3/25/2004	1	mg/L	0	1	
180	MW-9	Ammonia	9/29/2004	1	mg/L	0	1	
180	MW-9	Chloride	9/27/1989	80	mg/L	-1	0	500
180	MW-9	Chloride	12/20/1991	54	mg/L	1	5	
180	MW-9	Chloride	3/11/1992	78	mg/L	1	5	
180	MW-9	Chloride	9/24/1992	52	mg/L	1	2	
180	MW-9	Chloride	3/25/1993	50	mg/L	1	2	
180	MW-9	Chloride	9/22/1994	36	mg/L	1	1	
180	MW-9	Chloride	3/31/1995	37	mg/L	1	1	
180	MW-9	Chloride	9/25/1995	36	mg/L	1	1	
180	MW-9	Chloride	3/22/1996	36	mg/L	1	1	
180	MW-9	Chloride	3/24/1997	26	mg/L	1	1	
180	MW-9	Chloride	3/18/1999	32	mg/L	1	1	
180	MW-9	Chloride	9/23/1999	30	mg/L	1	1	
180	MW-9	Chloride	3/23/2000	38	mg/L	1	1	
180	MW-9	Chloride	9/14/2000	33	mg/L	1	1	
180	MW-9	Chloride	3/28/2001	42	mg/L	1	1	
180	MW-9	Chloride	9/26/2001	38	mg/L	1	1	
180	MW-9	Chloride	3/28/2002	34	mg/L	1	1	
180	MW-9	Chloride	9/10/2002	41	mg/L	1	1	
180	MW-9	Chloride	3/20/2003	40	mg/L	1	1	
180	MW-9	Chloride	9/23/2003	41	mg/L	1	1	
180	MW-9	Chloride	3/25/2004	37.2	mg/L	1	2	
180	MW-9	Chloride	9/29/2004	37.5	mg/L	1	2	
180	MW-9	Chromium (Dissolved)	12/20/1991	0.01	mg/L	0	0.01	0.1
180	MW-9	Chromium (Dissolved)	3/24/1997	0.01	mg/L	0	0.01	
180	MW-9	Chromium (Dissolved)	3/18/1999	0.01	mg/L	0	0.01	
180	MW-9	Chromium (Dissolved)	9/23/1999	0.01	mg/L	0	0.01	
180	MW-9	Chromium (Dissolved)	3/23/2000	0.01	mg/L	0	0.01	
180	MW-9	Chromium (Dissolved)	9/14/2000	0.01	mg/L	0	0.01	
180	MW-9	Chromium (Dissolved)	3/28/2001	0.01	mg/L	0	0.01	
180	MW-9	Chromium (Dissolved)	9/26/2001	0.04	mg/L	0	0.04	
180	MW-9	Chromium (Dissolved)	3/28/2002	0.04	mg/L	0	0.04	
180	MW-9	Chromium (Dissolved)	9/10/2002	0.002	mg/L	0	0.002	
180	MW-9	Chromium (Dissolved)	3/20/2003	0.002	mg/L	0	0.002	
180	MW-9	Chromium (Dissolved)	9/23/2003	0.002	mg/L	0	0.002	
180	MW-9	Chromium (Dissolved)	3/25/2004	0.02	mg/L	0	0.02	
180	MW-9	Chromium (Dissolved)	9/29/2004	0.02	mg/L	0	0.02	
180	MW-9	Iron (Dissolved)	12/20/1991	0.02	mg/L	0	0.02	
180	MW-9	Iron (Dissolved)	3/24/1997	0.1	mg/L	0	0.1	
180	MW-9	Iron (Dissolved)	3/18/1999	0.1	mg/L	0	0.1	
180	MW-9	Iron (Dissolved)	9/23/1999	0.1	mg/L	0	0.1	
180	MW-9	Iron (Dissolved)	3/23/2000	0.1	mg/L	0	0.1	
180	MW-9	Iron (Dissolved)	9/14/2000	0.1	mg/L	0	0.1	
180	MW-9	Iron (Dissolved)	3/28/2001	0.1	mg/L	0	0.1	
180	MW-9	Iron (Dissolved)	9/26/2001	0.1	mg/L	0	0.1	
180	MW-9	Iron (Dissolved)	3/28/2002	0.1	mg/L	0	0.1	
180	MW-9	Iron (Dissolved)	9/10/2002	0.1	mg/L	0	0.1	
180	MW-9	Iron (Dissolved)	3/20/2003	0.1	mg/L	0	0.1	
180	MW-9	Iron (Dissolved)	9/23/2003	0.1	mg/L	0	0.1	
180	MW-9	Iron (Dissolved)	3/25/2004	0.05	mg/L	0	0.05	

**Southside Sanitary Landfill
Groundwater Analytical Results**

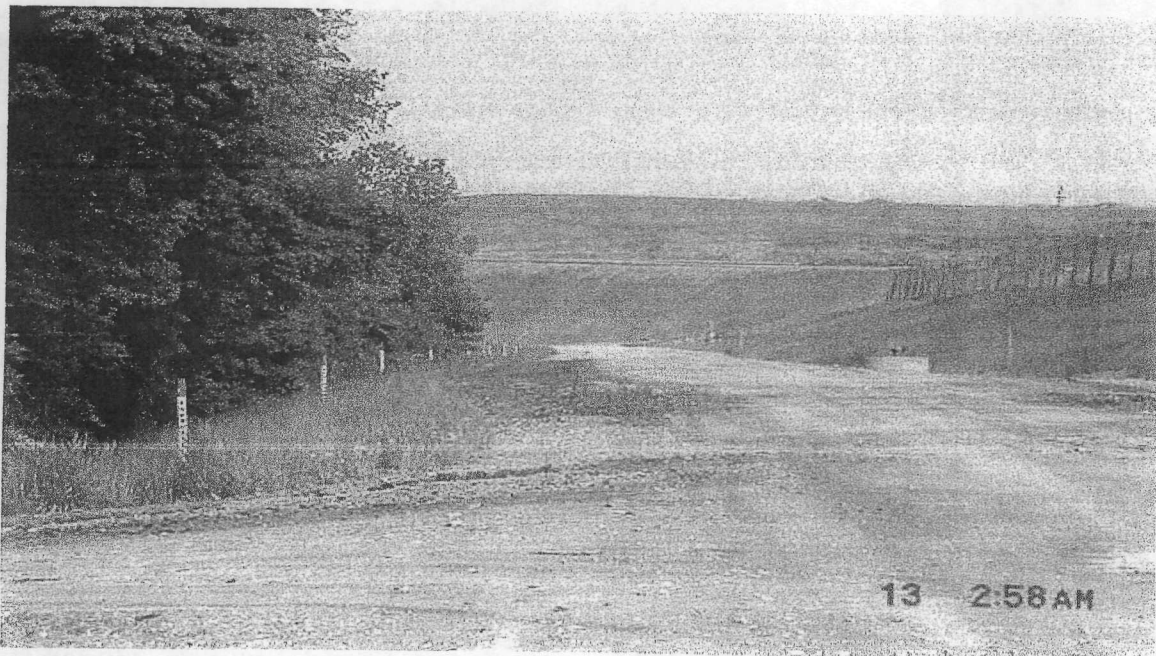
180	MW-9	Iron (Dissolved)	9/29/2004	0.05	mg/L	0	0.05	
180	MW-9	Sulfate	12/20/1991	51	mg/L	1	5	500
180	MW-9	Sulfate	3/24/1997	53	mg/L	1	5	
180	MW-9	Sulfate	3/18/1999	76	mg/L	1	5	
180	MW-9	Sulfate	9/23/1999	62	mg/L	1	5	
180	MW-9	Sulfate	3/23/2000	60	mg/L	1	5	
180	MW-9	Sulfate	9/14/2000	58	mg/L	1	5	
180	MW-9	Sulfate	3/28/2001	59	mg/L	1	5	
180	MW-9	Sulfate	9/26/2001	54	mg/L	1	5	
180	MW-9	Sulfate	3/28/2002	84	mg/L	1	50	
180	MW-9	Sulfate	9/10/2002	62	mg/L	1	5	
180	MW-9	Sulfate	3/20/2003	65	mg/L	1	5	
180	MW-9	Sulfate	9/23/2003	60	mg/L	1	5	
180	MW-9	Sulfate	3/25/2004	57.6	mg/L	1	12.5	
180	MW-9	Sulfate	9/29/2004	69.3	mg/L	1	12.5	
Notes:								
* Action levels are MCLs (when available) or calculated values based on linear regression.								
Action level units are parts per million (mg/L).								

Appendix C
Site Photographs

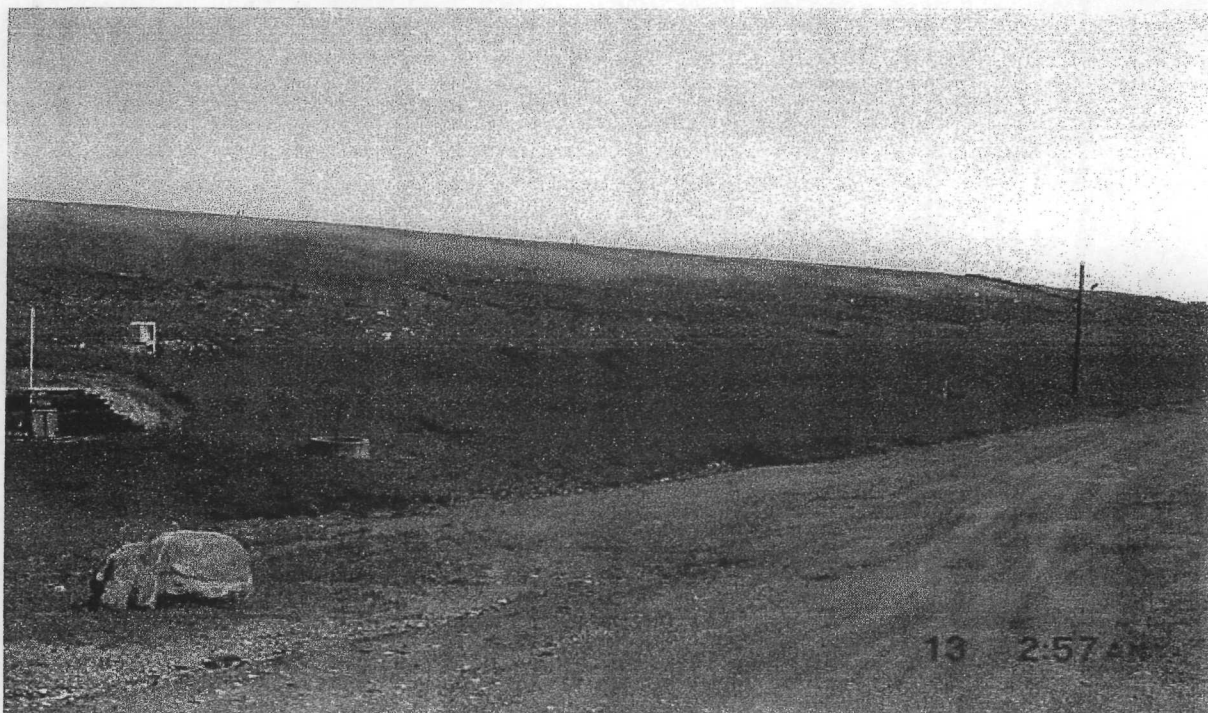
**Southside Sanitary Landfill
Marion County, Indianapolis**



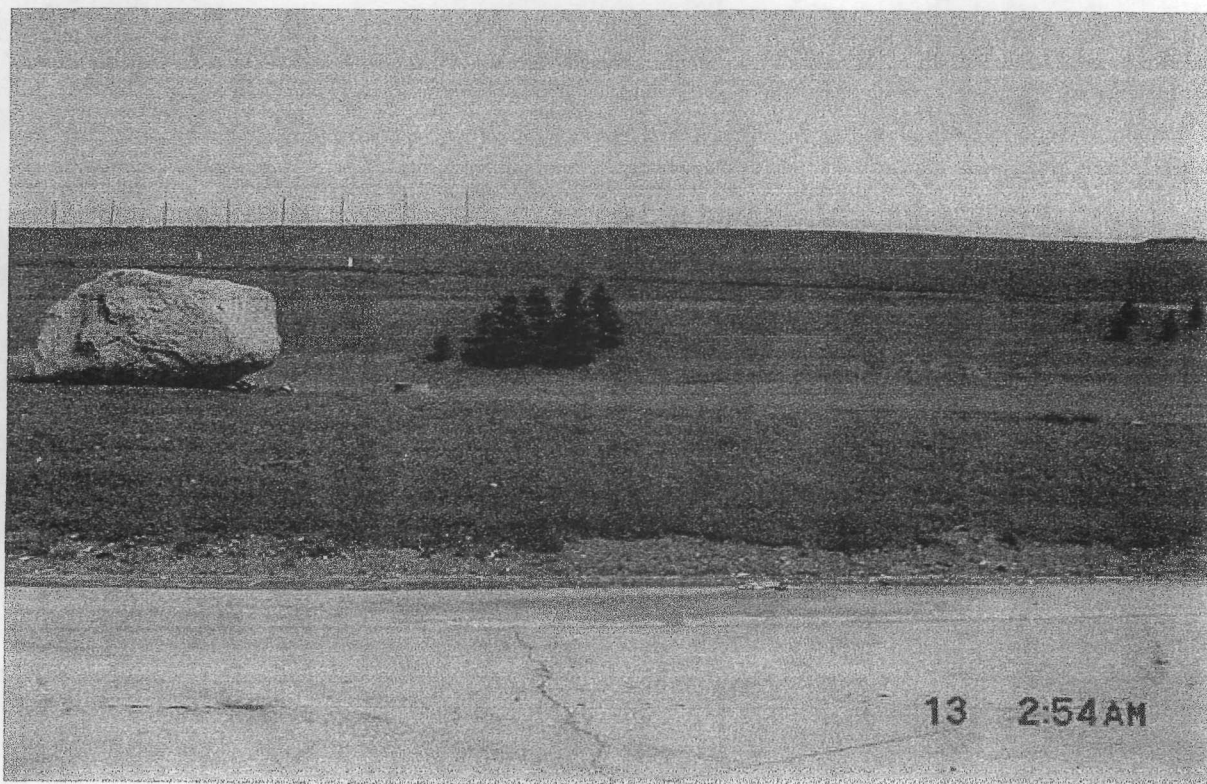
Portion of the sub-surface slurry wall along west side of landfill



Wooden stick-ups along west side of slurry wall



Perimeter road surrounding landfill



Vegetative growth on the landfill



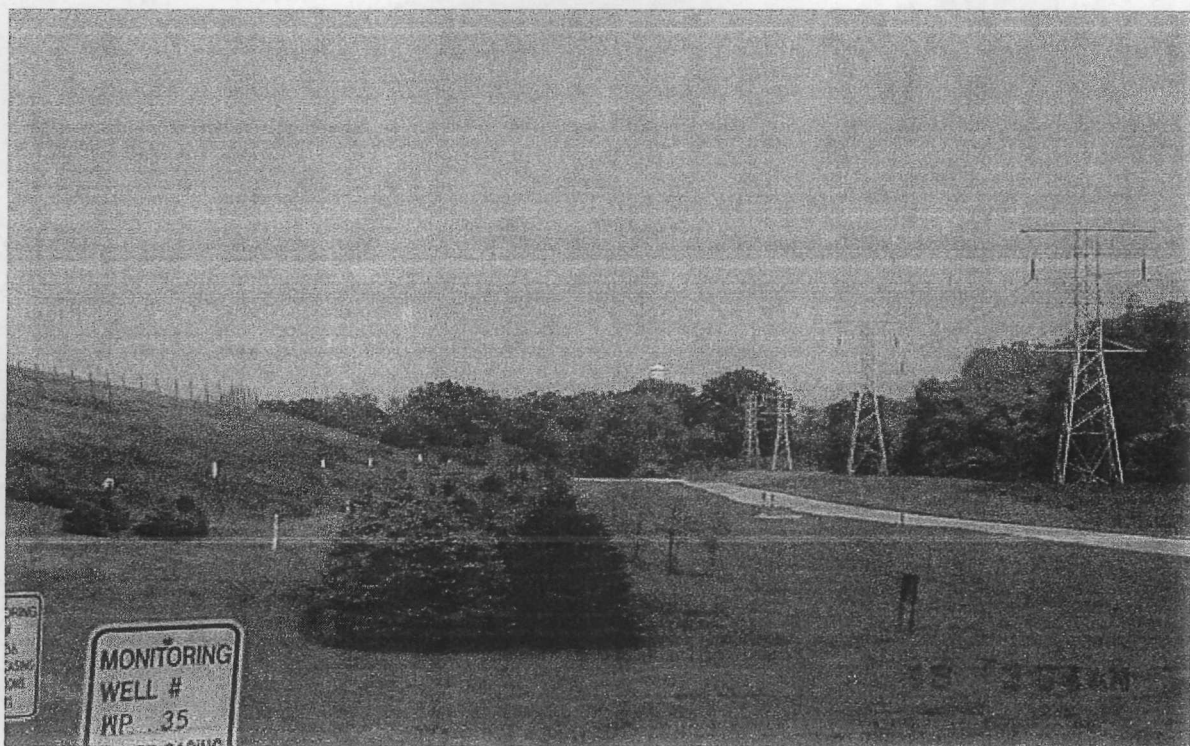
Monitoring wells on west side of landfill



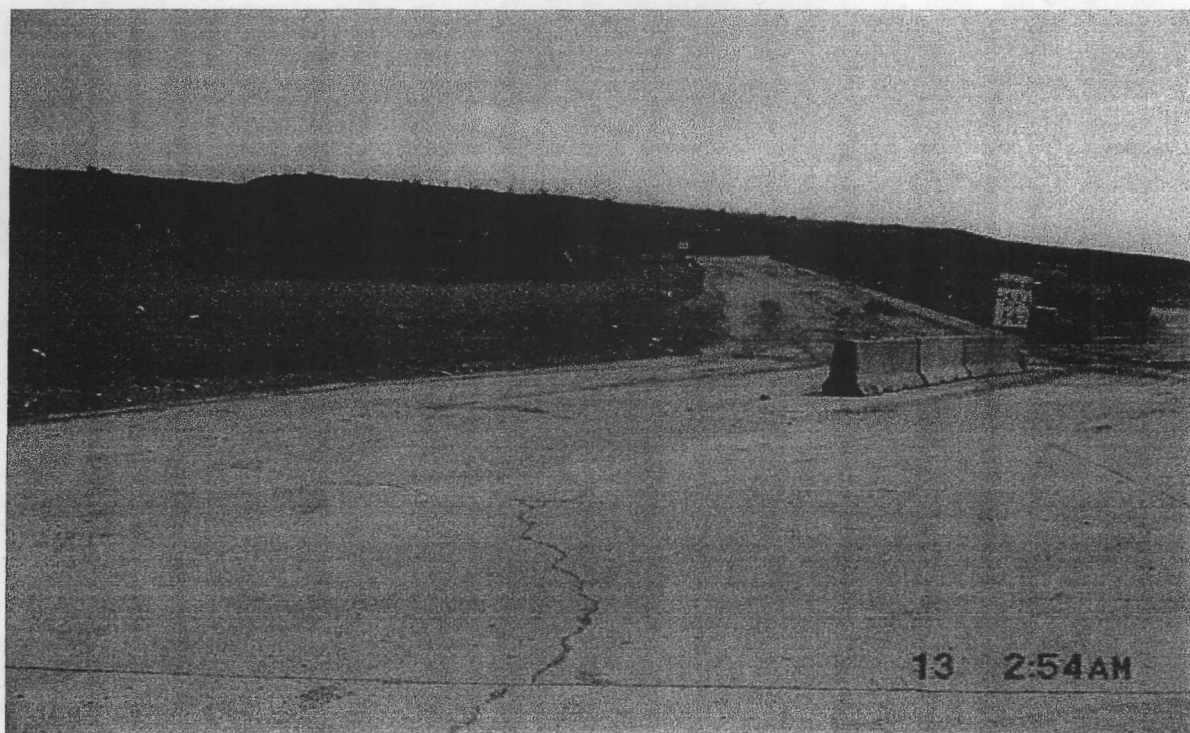
Vegetative growth on north side of landfill



Greenhouse development using landfill gas



Perimeter road southwest of landfill



Landfill entrance half-mile south of Kentucky Avenue and Warman Road